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THESIS

CHINA'S BANKING REFORM STRATEGIES AND ITS EFFECTS ON THE MODERNIZATION EFFORTS OF THE PEOPLE'S LIBERATION ARMY

by

Young-Kun Yu

December 2007

Thesis Co-Advisors: Robert McNab
Robert Looney

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The purpose of this thesis is to explore the People's Liberation Army's (PLA) modernization efforts and how banking reforms are instrumental to that effort. China must modernize its weaponry in order for the PLA to be a credible military force and enable China to continue its rise as a regional and global power. Bank reforms are one methodology for continued PLA modernization because the PLA desperately needs significant and sustained defense budget expenditures in order to bring the PLA into the 21st century. PLA modernization expenditures will have to compete with other societal reform programs for the windfall from an expanding economy. As China becomes older, wealthier, and more urbanized, Chinese Communist Party leaders will come under increasing pressure to provide more social services to its citizens. Defense expenditures and PLA modernization efforts will have to compete with additional government spending on pensions, health care, public infrastructure and the environment. Continued banking reform is an essential component to grow the Chinese economy and secure the significant and sustained defense spending that is critical to the PLA modernization effort.

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CHINESE BANKING REFORM STRATEGIES AND ITS EFFECTS ON THE MODERNIZATION EFFORTS OF THE PEOPLE'S LIBERATION ARMY

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Submitted in partial fulfillment of the
requirements for the degree of

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December 2007

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ABSTRACT

The purpose of this thesis is to explore the People's Liberation Army's (PLA) modernization efforts and how banking reforms are instrumental to that effort. China must modernize its weaponry in order for the PLA to be a credible military force and enable China to continue its rise as a regional and global power. Bank reforms are one methodology for continued PLA modernization because the PLA desperately needs significant and sustained defense budget expenditures in order to bring the PLA into the 21st century. PLA modernization expenditures will have to compete with other societal reform programs for the windfall from an expanding economy. As China becomes older, wealthier, and more urbanized, Chinese Communist Party leaders will come under increasing pressure to provide more social services to its citizens. Defense expenditures and PLA modernization efforts will have to compete with additional government spending on pensions, health care, public infrastructure and the environment. Continued banking reform is an essential component to grow the Chinese economy and secure the significant and sustained defense spending that is critical to the PLA modernization effort.

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TABLE OF CONTENTS MENU

I. INTRODUCTION 1
A. PURPOSE 1
B. IMPORTANCE 4
C. LITERATURE REVIEW 5
1. PLA Modernization 5
2. Financial System Reform 8
D. METHODOLOGY AND SOURCES 11

II. PEOPLE'S LIBERATION ARMY HISTORIC OVERVIEW 13
A. PLA UNDER MAO ZEDONG – "PEOPLE'S WAR" AS A BASELINE 13
B. DENG XIAOPING'S ECONOMIC PRIORITIES 16
1. Deng's PLA Modernization Plan 18
C. PLA UNDER DENG XIAOPING – "PEOPLE'S WAR UNDER MODERN CONDITIONS" 21
D. EXTRABUDGETARY FUNDING 22
1. 1998 Divestiture Act 24
E. RMA WITH CHINESE CHARACTERISTICS 26
1. Funding the RMA with Chinese Characteristics 31
F. HOW TO MODERNIZE? 34
1. Failure of Chinese Defense-Industrial Complex 34
2. Joint Partnership 37
3. Foreign Procurement 38
G. CONCLUSION 39

III. CHINESE BANKING SYSTEM 41
A. ECONOMIC STABILITY FIRST 41
B. FIRST STAGES OF BANK REFORM 42
1. Problem of State Owned Enterprises (SOEs) 46
2. Reforms of SOEs 46
C. EXCHANGE RATE REVALUATION 48
D. CHINESE HYPER-GROWTH DUE TO UNRESTRICTED BANK LENDING 49
E. PROBLEM OF NON-PERFORMING LOANS (NPLS) 51
1. Asset Management Corporations (AMCs) 53
2. On-going Challenge of NPLs 54
F. BANK LENDING AND OVERINVESTMENT STILL FUELING HYPERGROWTH 56

IV. BANKING REFORM TO SUSTAIN ECONOMIC GROWTH 59
A. HOW MUCH MONEY IS NEEDED? 59
1. Defense Expenditures Possibly "Crowded Out" By Societal Spending 63
B. IMPROVING CORPORATE GOVERNANCE 63

C. FOREIGN COMPETITION FOR BANKS 66
D. COST OF BANK RECAPITALIZATION 67
E. GOVERNMENT INTERVENTION 68
V. CONCLUSION 71
LIST OF REFERENCES 75
INITIAL DISTRIBUTION LIST 89

LIST OF FIGURES

Figure 2.1 Chinese Budget Categories, 1978-2003.....17
Figure 3.1 Pre-1979 Banking System.....44
Figure 3.2 The Banking System After Decentralization.....45
Figure 3.3 Share of State Bank Lending and Deposit to Total Lending and Deposit, 1997-2001 (qtrly) *Note: 1 = 100%*.....52
Figure 3.4 Current NPL Ratios in Asia.....55
Figure 4.1 Western Estimates of Chinese Military Expenditures (official budget = 100).....61

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LIST OF TABLES

Table 2.1 PLA business production output value and profits, 1978-1996.....23
Table 4.1 RAND Projections of Chinese Military Spending Through 2025.....62

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I. INTRODUCTION

A. PURPOSE

The purpose of this thesis is to explore the People's Liberation Army's (PLA) modernization efforts and how banking reforms are instrumental to that effort. Bank reforms are one methodology for continued PLA modernization because the PLA desperately needs significant and sustained defense budget expenditures in order to bring the PLA into the 21st century. As China continues to integrate into the global economy, Beijing's leaders are facing increasing domestic pressures to deal with all the externalities of uneven economic growth such as rising unemployment, urban-rural inequality, and income inequality. Important social programs such as better education, improved health care, a robust social safety net, environmental protection will all compete with PLA modernization efforts for valuable central funding. This thesis will show how banking reform is an essential element to secure funding for continued PLA modernization.

The PLA plays a critical role in shaping Chinese national strategic objectives, foreign policy, and defense policy as well as providing the strategic research, analysis, and intelligence that serve as the principal source for civilian leadership in determining China's security situation.[1]

1 James Mulvenon "China: Conditional Compliance." *Coercion and Governance: The Declining Political Role of the Military in Asia*, ed. Multiah Alagappa. (Stanford, CA: Stanford Univ. Press, 2001), 325.

Recent statements by senior Chinese leaders along with increased defense expenditures, are gaining worldwide attention. The head of the PLA's General Logistics Department, Liao Xilong, noted, "The present-day is none too peaceful . . .to protect national security and territorial integrity, we must adequately increase spending on military modernization."[2]

This statement accompanied official Chinese reports that 2007 defense expenditures would increase by nearly 18 percent. General Xilong went on to say the extra money would go toward improving China's ability to wage high-tech warfare, to defend its information systems against jamming, and to improve joint operations between its ground, air and sea forces.[3]

Chinese Premier Wen Jiabao made similar comments when he delivered his annual government report to the National People's Congress, asserting the PLA must modernize in order to "effectively carry out the historic mission of the army *in the new stage of the new century"* (emphasis added) and that China would "intensify defense-related research and efforts to produce advanced weaponry and equipment."[4] The "advanced weaponry" for the "new stage" refers to the widespread adoption of the Revolution in Military Affairs (RMA) concept that fundamentally changes the nature of warfare through the innovative application of high-technology. There are many different components for an RMA,

2 Edward Cody, "China Boosts Military Spending" *The Washington Post*, Monday, Mar 5, 2007, http://www.proquest.com/ (Accessed Aug 29, 2007).

3 Ibid.

4 Ibid.

but a significant and sustained defense budget is crucial in order to fund the exorbitant costs of high-technology weapons systems.

During the past several years, Chinese defense expenditures have steadily increased, primarily as a result of the remarkable expansion of China's economy. Economic growth has increased the capacity of the Chinese government to mobilize sufficient revenues to underwrite a strategic campaign of defense modernization.[5] From the Chinese perspective the two national objectives are complementary in that a robust economy will translate into a robust military.

Later sections of the thesis will establish why banking reform is essential to grow the overall economy. Continued PLA modernization depends upon "growing the economic pie" versus allocating a larger share to defense and modernization efforts. One method of increasing revenue is to raise the tax rate. However, the evidence suggests Beijing's abilities in tax administration and revenue collection isn't as efficient as it needs to be to secure the significant amount of funds immediately needed for PLA modernization and current social programs.[6]

Another strategy to grow the economy is to engage in significant deficit spending. For China, this has the potential benefit of alleviating some of the social pressures if Beijing funds employment relief, education, basic research, and public health programs. However, deficit spending is a risky proposal for Beijing since it is

5 Robert Sutter, *"Chinese Policy Priorities and Their Implications for the United States"* (Lanham: Rowan & Littlefield Publishers, 2000), 4.

6 Asia: "Return to Sender; China's Tax System 2007." *The Economist*, Apr 14, 2007. http://www.proquest.com/ (Accessed Sep 12, 2007).

still coping with crippling debts from state-owned enterprises (SOEs), and a surplus of fixed capital investments. Additionally, the Chinese are prodigious savers with a national savings rate of nearly 50 percent of GDP. Unfortunately, China's inefficient financial sector provides little diversity for capital investments, while state-owned lenders freely allocated capital to "no-hope state enterprises in order to keep them from firing everyone, so this so-called "investment" was really just welfare."[7]

The aforementioned factors support a program of increasing domestic consumption versus increasing government spending to boost the economy. Therefore, banking reform is an essential methodology to grow the economic pie.

B. IMPORTANCE

The question of whether banking reform will impact the capacity of the Chinese government to further modernize the PLA is of interest not only to the United States, but also to China's regional competitors throughout Asia and the Pacific. If successfully reformed, the Chinese banking sector requires the significant commitment of public resources to cover existing non-serviceable debt.

However, the government has consistently devoted more funds to weapon acquisitions. From 1990 to 2003, the official defense budget allocation for military equipment jumped from RMB 5 billion to RMB 64.8 billion. These increases are about twice the rate of growth of the official

[7] Sebastian Mallaby, "In Beijing, A Growing Problem" *The Washington Post,* Jul 11, 2005, http://www.proquest.com/ (Accessed Sep 12, 2007).

defense budget.[8] Also the portion of the budget earmarked for equipment increased from 16.3 to 34 percent in the same time period. Finally, from 1997-2003 official Chinese budget figures show the amount of funding for equipment grew 153 percent, more than for the other two categories of personnel and operations and maintenance (O&M).[9]

This increased defense spending shows a national commitment to absorb the potential negative political consequences of increased defense spending when there are so many other compelling programs competing for scarce dollars. The externalities of rapid economic expansion (rising unemployment from closing of state-owned enterprises, urban-rural inequalities, environmental degradation, expanding middle-class, pay and income disparities) are all front-stage and center in China and creating tremendous pressure on the Communist leadership.

C. LITERATURE REVIEW

1. PLA Modernization

The literature on China's military modernization program is contentious. While no one disputes that China is modernizing and significantly increasing defense expenditures, experts vocally disagree on the strategic and political intent behind the modernization. There are two ongoing debates concerning the rise of China as a regional military power. The first argument is whether or not China's military modernization poses a threat to the United

[8] Evan Medeiros, Roger Cliff, et al. *A New Direction for China's Defense Industry*, (Santa Monica, CA: Rand Corporation, 2005) xvii.

[9] Ibid, xvii.

States.[10] The Taiwan straits issue is the most likely scenario to precipitate a China-U.S. military confrontation. A significant part of this debate concerns China's true military combat capability, and whether or not China is catching up with the technologically and operationally superior U.S. forces. For potential regional conflicts, competing claims over the Spratly Islands is considered the most likely scenario to embroil China into hostilities with its regional neighbors.

There is no consensus on China's strategic intent behind its defense development and modernization program. Some experts argue that China can in fact modernize its military in order to secure its national interests.[11] Others assert it is not possible to accurately predict military capabilities more than 10 to 15 years in advance and regardless of China's modernization efforts, China's regional importance should not be underestimated.[12] However, there is a growing number of experts that argue despite China's increased defense expenditures, PLA combat

10 Thomas J. Christensen, "Posing Problems Without Catching Up, China's Rise and Challenges for U.S. Security Policy," *International Security* 25, no 4 (2001): 5-40; Aaron L. Friedberg, "The Struggle for Mastery in Asia," Commentary Nov. 2000, 17-26; Jane's Intelligent Review, "Pentagon Raises Eyebrow at China's Military Rise," 18, no 8 (2006); 50-51; Bates Gill and Michael O'Hanlon, "China's Hollow Military," *The National Interest* no. 53 (1999): John Ikenberry, "American Hegemony and East Asian Order," *Australian Journal of International Affairs*, 58, no.3 (2004): 353-367; Evan Medeiros and M. Tayler Fravel, "China's New Diplomacy," *Foreign Affairs*, Nov – Dec 2003, 22-35.

11 Jonathan Pollack, "China as a Military Power," *Military Power and Policy in Asian States: China, India, Japan*, ed., Onkar Marwah and Jonathan Pollack (Boulder, CO: Westview Press, 1980), 43-100.

12 Michael Pillsbury, "PLA Capabilities in the 21st Century: How Does China Assess Its Future Security Needs?" *The Chinese Armed Forces in the 21st Century*, ed., Larry Wortzel (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 1999), 89-158.

capability remains inferior to U.S. combat capability and will remain so, especially with their domestic defense-industrial complex.[13]

China has licensed production of Soviet/Russian armaments and experts unanimously agree that China's domestic weapons production capability are upgraded copies of 1950's and 1960's Soviet equipment.[14] Furthermore, while many new types of advanced weapons have entered service since the start of economic reforms and rising GDP growth in the late 1970's, those weapons systems are now hopelessly obsolete. Domestically produced weapons entering service since the 1980's are "incremental improvements on earlier designs" which in many cases, "can trace their lineage back to 1950s' Soviet technology."[15]

Typical of most Chinese SOEs, the Chinese defense-industrial complex (CDIC) suffers from extreme overemployment and overcapacity. The CDIC has three times as many employee as are needed. To put this into perspective, Sweden's Saab aviation unit employs 4,000

13 Bernard Cole and Paul Godwin, "Advancing Military Technology and the PLA: Priorities and Capabilities for the 21st Century," *The Chinese Armed Forces in the 21st Century*, ed., Larry Wortzel (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 1999), 194.

14 Paul Godwin, "The PLA faces the 21st Century: Reflections on Technology, Doctrine, Strategy and Operations," *China's Military Faces the Future*, ed., James Lilley and David Shambaugh (Armonk, NY: M.E. Sharpe, 1999): 63: John Lewis and Xue Litai, "China's Search for a Modern Air Force," *International Security* 24, no.1 (1999): 64-94; Onkar Marwah and Jonathan Pollak, eds. *Military Power and Policy in Asian States: China, India, Japan*. (Boulder, CO: Westview Press, 1980).

15 E. Medeiros, "A New Direction," 130.

workers, yet typically produces more aircraft per year than China's Shenyang Aircraft Corporation produces in 10 years with 30,000 workers.[16]

Later sections will outline Beijing's three broad options to quickly modernize its forces; create an advanced domestic weapons design and production capability by upgrading its CDIC, pursue joint ventures with foreign partners, or purchase advanced weapons from foreign militaries. All three options involve significant and sustained defense budget appropriations spanning decades.

2. Financial System Reform

There is a consensus among economists and financial analysts that China's unprecedented economic growth is simply the convergence of resources, primarily an enormous labor pool coupled with foreign investment. These financial experts cite traditional macroeconomic analysis to show how Beijing's economic reforms enabled China to tap its resources and decentralize, modernize, and liberalize its economic policies to sustain unprecedented gross domestic product (GDP) growth over the last 25 years.[17]

Beijing is pursuing a wide range of strategies to try and maintain and sustain their economic upswing. As China becomes more ingrained into the international financial

16 David Shambaugh, *Modernizing China's Military: Progress, Problems, and Prospects* (Berkeley CA: University of CA Press), 2002.

17 See for example, Lardy, Nicholas R. *Integrating China into the Global Economy*. Vol. 1. Washington D.C.: Brookings Institution Press, 2002; Adams, F. Gerard, Byron Gangnes, and Yochanan Shachmurove. "Why is China so Competitive? Measuring and Explaining China's Competitiveness." *The World Economy* 29, no. 2 (2006): 95-122; Jae Ho Chung. "China's Reforms at Twenty-Five: Challenges for the New Leadership." *China: An International Journal* 1, no. 1 (Mar 2003): 119-132.

community it is essential that Beijing's short and mid-term macroeconomic policies and reform measures continue to ensure China remains competitive in the global economy. Most experts are cautiously optimistic arguing that moderate economic growth is sustainable provided Beijing continues to reform and embrace free-market competition. Experts argue for a variety of micro and macro economic tools to manage this growth including inflation targeting, and currency devaluation. However, the two most critical reform measures to ensure China remains competitive in the global economy is banking reform and the continued shedding of state-owned enterprises (SOEs).[18] The decentralized Chinese banking system is fueling uneven growth among the 31 regions, and countering Beijing's monetary policies to control hyper-growth. Similarly, Beijing's attempts to sustain economic growth are countered by the underperforming and inefficient SOEs which still account for 30-40% of the Chinese economy.[19] Recent statements by senior officials suggest Beijing is aware of these daunting challenges and are focused on continued reform.

The current stages of banking reform are in many ways more difficult and complex than earlier financial system reforms. The problem of non-performing loans in the 1990s was a direct result of the success of other economic reforms, namely the dismantling (through sales, closing, or divestiture) of the state-owned enterprises. Preferential access to bank credit was the major policy instrument for

18 Roach, Stephen. "Soft Landing made in China." Morgan Stanley, Aug 22, 2006, http://www.morganstanley.com/(Accessed Jul 17, 2007).

19 Roach, Stephen. "Inside the China Debate." Morgan Stanley, Mar 22, 2006, http://www.morganstanley.com/ (Accessed Jul 17, 2007).

Beijing to manage the immediate unemployment pressures from closing SOEs.[20] Current reforms must be closely coordinated with further reforms of SOEs, the financial system, and the tax administration. This delicate coordination is politically volatile since the required closing of insolvent enterprises and the reorganization and recapitalization of the financial system is contributing to unemployment rates "far higher than China has experienced since the economic depression of the 1960's" as a result of the disastrous Great Leap Forward.[21]

Also, Beijing's leaders and the ruling Communist party are voluntarily surrendering a great deal of political and economic power with the on-going financial system reforms. By eventually allowing the emergence of private banks through the sale of ownership shares to individual investors or by the licensing of new private institutions and expanding the role of foreign financial institutions, market forces will have a greater input in focusing capital resources.[22] Nicholas Lardy elegantly captures the dilemma for Beijing's leaders; "Since the financial system in particular is the last remaining powerful instrument through which the state and party directly influence resource allocation, they are naturally reluctant to give up this power."[23]

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20 Mallaby, 1.

21 Nicholas Lardy, *China's Unfinished Revolution*, Washington D.C.: Brookings Institution Press, 1998, 220.

22 John Langlois, Jr., "The WTO and China's Financial System" *The China Quarterly* No. 167, (Sep 2001) 610-629.

23 Lardy, *China's Unfinished Revolution*, 221.

D. METHODOLOGY AND SOURCES

This thesis will explore China's banking reform strategies and its effects on modernization efforts of the PLA. To accomplish this, financial tables and figures will graphically capture and supplement the arguments. Despite significant progress in improving the transparency of state decision-making, China remains a closed communist country with tight controls over the media. Beijing's "official" position on the amount of defense spending, or on the overall success of financial system reforms must often be externally validated.

Official U.S. organizations, foreign governments, and independent consulting and analysis groups unanimously agree that official defense expenditure reporting and statistics are not all-inclusive. Two Central Intelligence Agency (CIA) reports cover defense components in China comparably to the U.S. defense budget, and conclude that China's military expenditures run approximately two times their published claims during various years analyzed in the reform period.[24] A Taiwanese White Paper on Chinese defense spending concluded China's actual defense spending was three times the official report.[25] Yet another report from the U.S. Arms Control and Dearmament Agency (ACDA) used purchasing power parity (PPP) estimates and concluded the actual Chinese budget was 12 times greater than the official figure.[26]

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[24] Solomon Karmel, China and the People's Liberation Army: Great Power or Struggling Developing State? (New York: St Martin's Press, 2000), 135.

[25] Ibid.

[26] Ibid.

Part of the reason is because of the Chinese Communist Party's tight hold on information and its tendency to "spin" information in the best positive light. Two significant current events may be fueling this tendency. The first is the 17th National Congress of the Chinese Communist Party which is expected to convene in October, 2007. Party Congresses only meet every five years and "is the most authoritative body in the CCP's organizational hierarchy."[27] The agenda for the week long delegation will most assuredly discuss the nation's economy and the state of reforms. The other event is Beijing's hosting of the 2008 Summer Olympics which provides China with an international stage to highlight its economic rise and emerging regional and global power.

Given the opaqueness of official Chinese statistics, I will rely heavily upon external financial estimates from investment firms and independent economists and analysts. The main sources for this analysis will include current business and scholarly books, journals, magazine articles, and on-line databases from established organizations such as the United Nations, International Monetary Fund, and the World Bank.

27 Lyman Miller, "The Road to the 17th Party Congress" *China Leadership Monitor* no. 18 (Spring 2006). Journal on-line. http://www.hoover.org/ (Accessed Sep 2, 2007).

II. PEOPLE'S LIBERATION ARMY HISTORIC OVERVIEW

A brief synopsis of PLA doctrine is essential to understand the current modernization efforts. In this chapter, I provide the background on the evolution of the PLA from the Red Army and establish how military readiness and combat capability is directly a function of the security environment and the threats within that environment. This section broadly defines the threats, and therefore modernization and readiness efforts of the PLA under the leadership of Mao Zedong, Deng Xiaoping and the post-Deng leadership.

A. PLA UNDER MAO ZEDONG – "PEOPLE'S WAR" AS A BASELINE

Under Mao Zedong, the PLA's operative military strategy, primarily at the campaign level of warfare, has been known as "active defense."[28] This term has its origins in the Chinese revolutionary war, when Mao pursued a military strategy of "offensive defense or defense through decisive engagements," in which PLA units (then the Red Army) would proactively engage and close with the enemy, exploit its weak points and attempt to destroy the enemy's capability and will.[29] "Active defense," as elaborated by Mao, takes place within a broader context of "people's war." The Maoist theory of people's war is often regarded as passive warfare of necessity – "to lure the enemy in deep"

28 David Shambaugh, *Modernizing China's Military: Progress, Problems and Prospects*, (Berkeley, CA: University of California Press, 2002), 58.

29 Ibid.

in order to overcome the enemy's technological superiority by playing to the strengths of geography and the civilian population.[30]

As with many translated Chinese terms and aphorisms, "people's war" has multiple meanings and connotations. This thesis will concentrate on the purely military, doctrinal component of people's war as an irregular type of warfare based on mobility, attrition, and other small-unit, guerilla type tactics.[31] With this particular type of warfare, land was traded for time as the Red Army strategically withdrew from massed forces. Red Army units would then harass better equipped Kuomintang forces with guerrilla style hit-and-run tactics. The ideological basis for the Maoist "People's War" concept is suited to mobilizing the populace to fight a national struggle for liberation. In the context of revolutionary discontent, the People's War ideology stressed that political resolve, correct political doctrine, and unswerving loyalty to command would inevitably triumph over capitalist, imperialist forces.[32]

However this ideology is woefully inadequate outside a revolutionary struggle and the newly emerged People's Republic of China (PRC) faced a dynamic security environment. China shares more borders than any other

30 Shambaugh, *Modernizing*, 58.

31 The political definition describes the revolutionary nature of the PLA and the unique relationship between the military and the CCP leaders. The doctrinal definition refers to continental defense by regular and irregular forces. See James Mulvenon and Andrew Yang, *Seeking Truth From Facts: A Retrospective on Chinese Military Studies in the Post-Mao Era* (Santa Monica, CA: RAND Corporation), 2001.

32 Karmel, 31.

country in the world;[33] has overlapping sea claims with some of those same states and six other maritime nations;[34] and had territorial sovereignty issues with three entities that it didn't yet control (Taiwan, Hong Kong and Macau).[35]

In rapid succession, two global events pressed the need for military modernization and abandonment of the Maoist "People's War" concept. The first was the Soviet Union's successful detonation of its first nuclear device in 1949, the same year the Chinese civil war ended. The second was the Korean war which erupted on June 1950.

> The Korean War challenged [Maoist] dogma. It brought Chinese troops face-to-face with the devastating lethality of modern air and naval power. The threats by the United States to use nuclear weapons in Korea and against China itself during the war and subsequent crises activated Mao's ambition to make China forever immune to such intimidation. Despite the apparent perpetuation of People's War as scripture, Beijing secretly started Projects 02 (nuclear weapons), 05 (ballistic missiles), and 09 [focused on nuclear-powered submarines and its missiles].[36]

By scanning its security environment, China recognized its overwhelming military weakness and concluded that any future war would be an all-out confrontation against a

---

33 China borders 14 states: Afghanistan, Bhutan, Burma, India, Kazakhstan, North Korea, Kygyzstan, Laos, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Vietnam.

34 Those nations include: South Korea, Japan, the Philippines, Brunei, Malaysia and Indonesia.

35 Andrew Nathan, Robert Ross, *The Great Wall and the Empty Fortress: China's Search for Security*, (New York, NY: W.W. Norton and Company, 1998), 43.

36 John Lewis, Xue Litai, *China's Strategic Seapower: The Politics of Force Modernization in the Nuclear Age*, (Stanford, CA: Stanford University Press, 1994), 211-214.

"superior occupation force" and should prepare for "limited, high-tech wars and regional struggles."[37] The PLA had to modernize its military equipment in order to address this security challenge.

B. DENG XIAOPING'S ECONOMIC PRIORITIES

Along with his many other significant reforms, Deng Xiaoping espoused China's desire to expand "its comprehensive national power." Deng popularized this phrase in the early 1980's and while its exact meaning is often debated, the essential element is to denote a more expansive definition of national power than simply military might.[38] Chinese analysts regard Deng's broadened definition as an implicit critique of the "economically unsustainable pursuit of pure military might" by the former Soviet Union, and Deng wanted to ensure that China doesn't repeat this mistake.[39] Instead, a "technologically innovative economy" forms the foundation for comprehensive national power, coupled with the country's "political and military systems, science and technology, diplomacy, and other less tangible factors.[40]

Figure 2.1 shows the steady decline of military expenditures through the Deng Xiaoping years as domestic economic priorities became paramount. The PLA's combat capability was deliberately allowed to languish as Beijing's leaders single-mindedly focused on building economic

37 Karmel, 30-31.

38 James Mulvenon, Murray Tanner, et al *Chinese Responses to U.S. Military Transformation and Implications for the Department of Defense,* (Santa Monica, CA: Rand Corporation, 2005), 8-9.

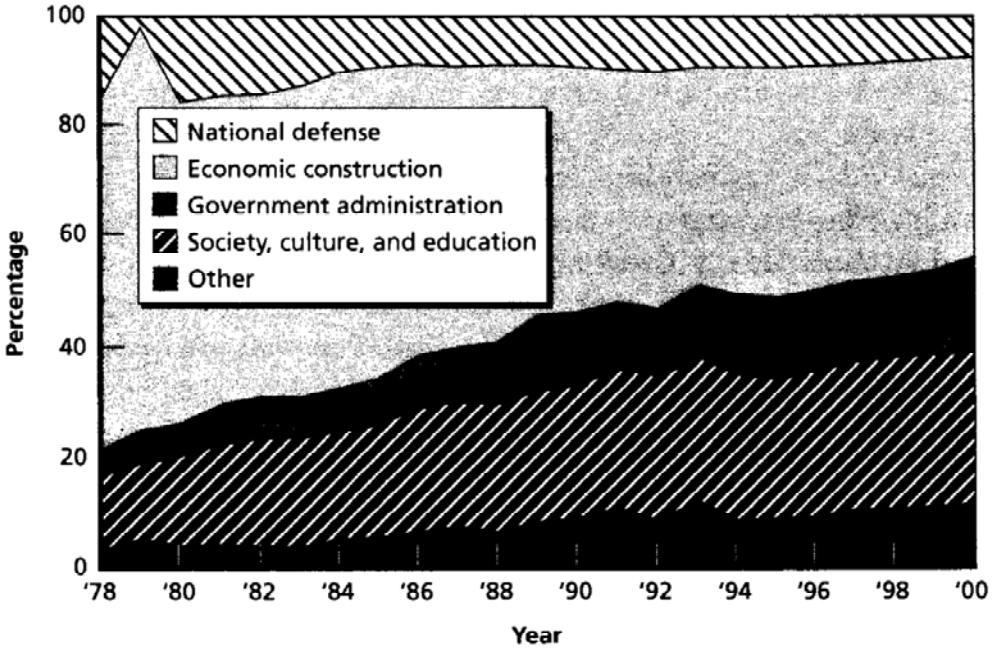
39 Ibid.

40 Ibid.

capacity during the early years of the reform period. A book published by the Contemporary China Publishing House, *The Chinese PLA* exactly captures the philosophical intent behind Beijing's neglect of the PLA:

> International power is not achieved primarily through nuclear capability, army size, alliances or diplomacy. Instead, its primary source is a nation's economic base. By equating economic development with power development and stridently advocating economic construction, Deng Xiaoping's contribution to Chinese strategic thinking on "military sciences" would long endure.[41]

Figure 2.1 Chinese Budget Categories, 1978-2003[42]



In this context, government procurement of military goods declined dramatically following the adoption of Deng's

41 Karmel, 128.

42 Mulvenon, Tanner, et al. *Chinese Responses*, 21.

"Four Modernizations" policy, which placed the military as the last priority.[43]

1. Deng's PLA Modernization Plan

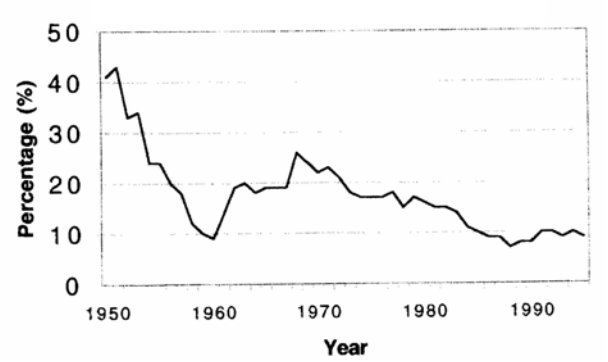
Military expenditures as a percentage of central government spending dropped significantly, from a wartime high of more than 40 percent in 1950 immediately following the civil war to approximately 8 percent in 2002.[44] When Deng Xiaoping emerged as the Secretary General of the Communist Party of China in 1978, his far-ranging reforms would profoundly affect the readiness and combat capability of the PLA. Even if one only examines spending since the onset of Deng Xiaoping's economic reforms in the later 1970's, military expenditures as a percentage of government expenditures have fallen almost by half, from 15 percent to 8 percent.[45] Figure 2.2 shows the overall downward trend in the percentage of the Chinese national budget spent on defense.

43 The Four Modernizations were in the fields of Agriculture, Industry, Science/Technology, and National Defense. See also John Frankenstein, "China's Defense Industries: A New Course?" in James C. Mulvenon and Richard H. Yang, eds., *The People's Liberation Army in the Information Age,* (Santa Monica, CA: RAND Corporation), CF-145-CAPP/AF, 1999.

44 Crane, *Modernizing,* 109.

45 Ibid.

Figure 2.2 Percent of National Budget Spent on Defense, Official Figures 1950-1995



Defense spending after 1960 significantly increased as a result of Mao Zedong's Third Front campaign,[46] and another sharp spike occurred in 1969 as the PLA was used to suppress the Red Guard factions from the Cultural Revolution.[47] Except for those two events, defense expenditures continually declined.

In 1981, Deng addressed the PLA and called on the Chinese military to build a powerful, modern and professionalized revolutionary armed force and, "on the basis of our steadily expanding economy, [to] improve the army's weapons and equipment and speed up the modernization of our national defense."[48] Significantly, Deng used the

46 The Third Front was Mao's plan to "create a huge self-sufficient industrial base in the Chinese interior to serve as a strategic reserve in the event of China being drawn into war. This program was immensely costly, having a negative impact on China's economic development that was certainly more far-reaching than the disruption of the Cultural Revolution." See Barry Naughton, "The Third Front: Defense Industrialization in the Chinese Interior." *The China Quarterly*, no. 115 (Sep 1991): 351-386.

47 Karmel, 126.

48 Joseph Gallagher, "China's Military Industrial Complex: Its Approach to the Acquisition of Modern Military Technology" *Asian Survey* Vol 27 No. 9 (Sep 1987): 991.

term modernization to specifically refer to the upgrading of weapons and equipment. This narrow Chinese usage of the term military modernization does not encompass other improvements such as development of military tactics, techniques and procedures and regularization of the military. Those elements are essential to the overall readiness of a military but remain beyond the scope of this thesis.

Deng Xiaoping expressed the national policy when he said defense modernization "can be achieved only when it is based on the development of the country's industry and agriculture as a whole." To PLA Chief of Staff Yang Dezhi, this meant that the PLA "should rely on the development of [the] national economy and science and technology to change the backwardness of our weaponry."[49] The new attention to advanced weaponry was essential since the PLA strategists revised their threat assessment in the 1970's and 1980's and concentrated on frontier defense. By this time, Beijing's relations with the Soviet Union had frosted over considerably and defending the 4,000 mile border between the two countries became a primary concern. One of Deng's more important doctrinal revisions was increased emphasis on weaponry and technology instead of the ideological and human factor in war. These redefinitions called for a new aphorism, and the guiding phrase "people's war under modern conditions" was born.[50]

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49 Joseph Gallagher, "China's Military Industrial Complex: Its Approach to the Acquisition of Modern Military Technology" *Asian Survey* Vol 27 No. 9 (Sep 1987): 991.

50 Shambaugh, *Modernizing China's Military*, 63.

C. PLA UNDER DENG XIAOPING – "PEOPLE'S WAR UNDER MODERN CONDITIONS"

People's War Under Modern Conditions required a wholesale upgrade of arms and equipment since the closest threat (Soviet Union) possessed superior mobility, firepower, and tactics. Even senior PLA officials conceded they would be hard pressed to defend the Chinese mainland from modern warfare with the Soviets based on maneuver and joint operations, and the previous doctrine of "luring the enemy in deep" would be disastrous.[51] Instead, the new strategy sought to blunt the technological advantages of the Soviet Union by integrating armor, artillery, and air defense allowing PLA forces to "win the first battle." Additionally, for the first time since the Chinese nuclear program was inaugurated in the late 1950's, nuclear forces were included in operational military strategy to defend the Chinese mainland.[52]

These operational adjustments required significant and sustained defense expenditures and the closer integration of China's defense-industrial complex. With the backing of China's economic development and scientific and technological achievements, the PLA sought to accelerate its weaponry and equipment modernization drive mainly by relying on its own efforts. However, self-reliance on weapons modernization isn't the most effective strategy for rapid modernization and embracing a true RMA. Ever since the 1980's, Western experts unanimously agree that China's

51 James Lilley and David Shambaugh, eds. *China's Military Faces the Future*, American Enterprise Institute for Public Policy Research: Washington D.C.: 1999, 44-45.

52 Ibid.

organic defense-industrial complex, military research and development and production capabilities are beset with weaknesses and limitations.[53] Given Deng Xiaoping's explicit priority of economic development, where would the PLA and the defense industry get the desperately needed funds to modernize its defense forces?

D. EXTRABUDGETARY FUNDING

From the late 1970's, when Deng Xiaoping initiated far-reaching reforms of China's planned economy, until recently, China's defense-industrial complex (CDIC) led a troubled existence. Government procurement of military goods declined dramatically following the adoption of Deng's "Four Modernizations" policy, which placed the military as the last priority.[54] As a result, most defense enterprises were officially encouraged to diversify into production of non-military/civilian goods or engage in arms sales to replace dwindling government purchases of military equipment. Many firms soon became dependent on these alternate sources of income for their very survival.[55]

The fact the PLA engaged in commercial economic activities by itself isn't particularly noteworthy. Many professional militaries were either forced by circumstances

53 Bates Gill, "Chinese Military-Technical Development: The Record for Western Assessment," http://www.rand.org/pubs/conf_proceedings/CF160/CF.ch7.pdf (Accessed Aug 29, 2007).

54 The Four Modernizations were in the fields of Agriculture, Industry, Science/Technology, and National Defense. See also John Frankenstein, "China's Defense Industries: A New Course?" in James C. Mulvenon and Richard H. Yang, eds., *The People's Liberation Army in the Information Age* (Santa Monica, CA: RAND Corporation), CF-145-CAPP/AF,1999.

55 Evan Medeiros, Roger Cliff, et al, *A New Direction for China's Defense Industry*, (Santa Monica, CA: RAND Corporation, 2005), 5.

or opportunity to loot or "requisition" economic production for their very survival.[56] What makes the Chinese case unique is the sheer size and scope of the PLA's extra-budgetary activities. In the 1980's, official Chinese publications placed the number of PLA enterprises at 10,000 while non-Chinese estimates varied from 30,000 to as many as 50,000.[57] At the height of the PLA's economic activities, "PLA, Inc.," as it is colloquially known controlled a multi-billion dollar international business empire that included large farms to world-class hotels and transnational corporations.[58] Table 2.1 shows the amount of funds generated by PLA, Inc.

Table 2.1 PLA business production output value and profits, 1978-1996[59]

Year	Production output value (Rmb billion) (annual % increase in parens.)	Pre-tax profits/after-tax profits (Rmb billion) (annual % increase in parens.)	Pre-tax rate of return (Rmb billion) (after-tax rate of return in parens.)
1978	1.50	0.35/0.28	23.30% (18.6%)
1985	5.60	0.80/0.64 (31.6%)	14.29% (11.43%)
1986	7.00 (20%)	1.17/0.96 (31.6%)	16.71% (13.71%)
1987	10.35 (32.4%)	2.40/1.99 (51.25%)	23.20% (19.3%)
1988	14.00 (26%)	2.70/2.15 (11.1%)	20.70% (15.36%)
1989	20.00 (30%)	3.80/3.00 (29%)	17.50% (15%)
1990	22.50 (11.1%)	4.00/3.20 (5%)	17.80% (14.2%)
1991	24.30 (7.4%)	4.20/3.36 (4.7%)	17.30% (13.83%)
1992	28.00 (13.2%)	5.00/4.00 (16%)	17.90% (14.29%)
1993	33.50 (16.4%)	6.00/4.80 (16.7%)	17.90% (14.33%)
1994	33.50 (0%)	6.00/4.80 (0%)	17.90% (14.33%)
1995	38.00 (11.4%)	6.50/5.30 (8.2%)	17.10% (13.95%)
1996	40.00 (5%)	6.50/5.30 (0%)	16.25% (13.25%)

56 Evidence supports this trend in post-revolutionary Leninist states of Cuba, Vietnam, and Laos. See Mulvenon, "Soldiers of Fortune" 4.

57 Tai Ming Cheung, *China's Entrepreneurial Army,* (New York, NY: Oxford University Press, 2001), 59

58 Mulvenon, *Soldiers of Fortune*, 3.

59 Cheung, 151.

These remarkable growth rates, especially the nearly 20% average increase from 1986 through 1993 surpassed the forecasts of military authorities who only expected modest 5% growth when they approved the extra-budgetary commercial ventures.[60]

1. 1998 Divestiture Act

On 22 July 1998, at an expanded session of the Central Military Commission, CMC Chairman Jiang Zemin gave a speech in which he publicly called for the dissolution of the military-business complex, asserting:

> To make concerted efforts to properly develop the army in an all-around manner, the central authorities decided: The army and the armed police should earnestly screen and rectify various commercial companies operated by their subordinate unites, and shall not carry out any commercial activities in the future . . .Military and armed police units should resolutely implement the central authorities' resolution and fulfill as soon as possible the requirements that their subordinate units shall not carry out any commercial activities in the future.[61]

This bold decision significantly challenged the powerful PLA generals by directly affecting their military budgets, and often, their personal pocketbooks. Because these enterprises were run at all levels of the military, there was a significant lack of oversight on the collection and accounting of profits and corruption was rampant. One widespread scandal in the northeastern Liaoning Province involved US$500,000 and 300 military personnel from 43

60 Cheung, 150.

61 Mulvenon, "Soldiers of Fortune," 176.

different army units.[62] Even high-ranking PLA officers were directly involved, and in 1992, Major General Liang Gingzhi, head of one of the General Political Department's commercial departments was arrested for his involvement in illegal profit skimming.[63]

While the PLA's divestiture of its commercial enterprises has proceeded remarkably well since the 1998 order, it has certainly not been complete. It is estimated that as many as 20 percent of the units involved in extracurricular commerce have continued with their business activities—which would yield approximately $2 billion per year in revenue.[64]

In March 1999, Minister of Finance Xiang Huaicheng announced the military budget for the new fiscal year in his annual work report:

> In line with the CPE Central Committee request, central finances will provide appropriate subsidies to the army, armed police force, and political and law organs after their severance of ties with enterprises. In this connection, 104.65 billion renminbi, up 12.7 percent from the previous year because of the provision of subsidies to the army and of regular increases.[65]

Despite the significant loss of operating funds, there is substantial evidence that the divestiture, in principle, was supported by a corruption-weary military leadership.

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62 Thomas Bickford, "The Chinese Military and Its Business Operations: The PLA as Entrepreneur," *Asian Survey,* Vol 34, No. 5. (May, 1994), pp. 460-474.

63 Bickford, 469.

64 Shambaugh, *Modernizing China's* Military, 221.

65 Keith Crane, Roger Cliff, *Modernizing China's Military: Opportunities and Constraints,* RAND Project Air Force. (Santa Monica, CA: Rand Corp, 2005) 119.

One particularly egregious case of corruption involved six PLA and People's Armed Police companies that was allegedly bankrupting the country's two geographical oil monopolies.[66] Another case of rampant smuggling by the military during the Asian financial crisis allegedly deprived the central government of hundreds of billions of renminbi in customs revenue which contributed to worsening deflation.[67] In addition to actual illegal activity, questionable diversion of valuable military resources for commercial purposes was widespread. A Jinan military Region investigation found that a tank regiment had diverted 53 percent of its training fuel, and an artillery regiment 70 percent of its allocated fuel to commercial activities.[68]

At the height of "PLA, Inc." in the mid 1990s, one Chinese source placed the total PLA assets at 180 billion RMB (US$20.2 billion).[69] Foreign estimates of annual profits range from $1 to $3 billion, although the General Logistics Department claimed in 1998 that the actual figure was on the order of $600 to $700 million.[70]

E. RMA WITH CHINESE CHARACTERISTICS

> [China] must actively seek to promote the revolution in military affairs with Chinese Characteristics and make efforts to achieve

66 Mulvenon, *Soldiers of Fortune*, 177.

67 Ibid.

68 Shambaugh, *Modernizing China's Military*, 202.

69 Ibid.

70 Ibid, 200.

development by leaps and bounds in national defense and armed forces mobilization.[71]

PRC Premier Wen Jiabao, March 16, 2004

In the past decade, top Chinese military and civilian officials have affirmed the importance of a "revolution in military affairs" to China's modernization with consistent imprecision.[72] In December 2004, for example, the State Council Information Office of the PRC published its third white paper on national defense. An effort to describe China's national defense policies and the army's modernization process, "China's National Defense in 2004" is also an attempt to frame China's military modernization in the context of global trends in military transformation. In the first chapter, the document declares that the "Worldwide Revolution in Military Affairs (RMA) is gaining momentum," yet the paper never defines the phrase, nor does it explain more fully which elements of Chinese military modernization constitute a revolution.[73]

Defining an RMA is critical because it bounds the discussion of what constitutes normal reconstitution of forces and equipment, versus evolutionary advances in tactics, techniques and procedures (TTP), and truly "leap-frogging" TTPs that redefine the scope and nature of warfare. An example of the evolutionary model of modernization is Deng Xiaoping's PLA modernization efforts

71 Jason Kelly, "A Chinese Revolution in Military Affairs" *Yale Journal of International Affairs*, (Winter-Spring, 2006) http://www.yale.edu/yjia/articles/Vol_1_Iss_2_Spring2006/kelly217.pdf (Accessed Aug 27, 2007).

72 Ibid.

73 Ibid.

of the mid to late 1970's. Defense modernization during this period followed a two pronged approach.

> The long term strategic objective was to create a largely self-sufficient defense establishment capable of developing and sustaining modern forces sufficient both for defense and to grant China the military status of a world power. A second objective was to improve the PLA's near-term combat effectiveness using the weapons and equipment in its current inventory. These two processes were intimately related. If the PLA was to become capable of effectively using its current and then more technologically sophisticated weapons and equipment as they were introduced in the future, the groundwork had to be laid before more advanced weaponry entered the inventory. In short defense modernization was to be incremental and slow.[74]

The "incremental and slow" characterization of PLA modernization was the traditional, conservative approach favored by Beijing. Adjustments to operational military doctrine ebbed and flowed as PLA war-planners scanned their security environment and concluded the Soviet Union was no longer their greatest threat. During the height of the Cold War, China's security planners concluded that the Soviet Union and the United States were locked in a bi-polar, superpower stalemate. Therefore, a major and potentially nuclear war with the Soviet Union seemed unlikely, and that future military conflicts were projected to more likely be very limited in terms of political objectives and geographical scope.[75]

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74 Paul Godwin, "Compensation for Deficiencies: Doctrinal Evolution in the Chinese People's Liberation Army: 1978-1999" in *Seeking Truth From Facts: A Retrospective on Chinese Military Studies in the Post-Mao Era*, pp. 87-118, eds., James Mulvenon and Andrew Yang. (Santa Monica, CA: RAND Corporation), 2001.

75 Godwin, 97.

However, the conservative "incremental and slow" approach to modernization proved ineffective for China's security needs. The 1991 Desert Storm/Desert Shield campaign provided the impetus for the wholesale adoption of RMA terms and theoretical framework. Although experts have not completely agreed upon the exact definition of an RMA or when a nation's forces have successfully undergone this transformation, there is enough unanimity to create a common theoretical framework. Most experts agree that "significant and punctuated advances in technological capabilities initiate revolutions in military affairs."[76] However the technology piece is only the spark since a successful RMA also requires key bureaucracies to have certain technological adaptations to enable and guide those technological advances toward dramatic improvements in military efficiency and capability.[77]

Andrew Marshall, Director of the Pentagon's Office of Net Assessment is widely considered as one of the leading specialists on military transformation and RMA among both Chinese military planners and U.S. analysts.[78] He argues that the interconnectedness of technology and bureaucratic innovation is critical in the commonly accepted definition of an RMA:

> [A] major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in military doctrine and operational and

76 Kelly, 59.

77 Ibid.

78 Kelly, 59, and Michael Pillsbury, "China Debates the Future Security Environment" (Washington DC: National Defense University Press, 2000), Chapter 6. http://www.fas.org (Accessed Aug 30, 2007).

> organizational concepts, fundamentally alters the character and conduct of military operations.[79]

Therefore, technology is the key stimulus for an RMA. The clearest expression of technological breakthroughs in warfare was the Persian Gulf War of 1991.

The Persian Gulf War in 1991 was exactly the type of war PLA theorists had been theorizing about since their concerted drive to modernize.[80] The war was relatively short, highly intense, and fought for prescribed political objectives within a confined theater of operations. The allied weapons and tactics were generations ahead of what China encountered during their last significant engagement with an enemy force (Vietnam in 1979) and hoisted a harsh realization on Chinese senior military leaders that the Chinese military wasn't prepared to deal with the new, high technology era of warfare.[81] The shock of the Gulf War was further exacerbated because ever since China's failed incursion into Vietnam, China's military initiated a sweeping modernization and reform program.[82] The Gulf War prompted yet another deep re-appraisal of the state of Chinese military forces, the nature of contemporary warfare, and the most effective reforms required to ready Chinese forces. The PLA strategy was revised to focus on "limited wars under high-technology conditions" and the modernization program would have to heavily rely upon technology to expand the Chinese military capability.

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79 Kelly, 59.

80 Godwin, 101.

81 Shambaugh, "*Modernizing China's Military: Opportunities and Constraints*," 2.

82 Godwin, 101.

1. Funding the RMA with Chinese Characteristics

The Chinese government has substantially increased its defense expenditures, and the 2004 National Defense White Paper outlines defense expenditures on equipment increasing an average of 18 percent per year from 2000 and 2003.[83] Both in real terms and as a share of GDP in the 1980's, officially reported military spending increased at double-digit rates between 1989 and 2002.[84] Although this string of budget increases was broken in 2003 when overall growth returned to single digits as the official military budget rose 9.4 percent, the official budget still rose more rapidly than growth in overall government expenditures, which was kept to 7.7 percent in that year.[85] Beijing continued the high levels of defense spending with a 17.8 percent increase in the defense budget for 2007.[86]

Other signs also show that the Chinese government has given defense expenditures a higher priority than in the past decade. Although the number of people in uniform has fallen, military pay and benefits have risen sharply in order to enhance the quality of life for PLA soldiers. Since the mid 1990's, China has increased expenditures on military procurement to purchase a number of advanced, more capable combat aircraft and naval ships, many of which have come from Russia and abroad.[87]

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83 Medeiros, 1.

84 Crane, 223.

85 Ibid.

86 Stephen Fidler, "China Tries to Allay Fears about 17.8% Defence Budget Rise" in Financial Times, (London: UK, Jun 2007), 6. http://proquest.umi.com/pqdweb?index (Accessed Aug 20, 2007)

87 Crane, 224.

As more money is funneled toward defense spending and modernization, Beijing has three broad opportunities to channel these valuable funds into military capabilities. The first is to produce all the weapons needed for its military with its organic defense-industrial complex. The second is to purchase entire weapons systems and associated parts and technology from external sources. The third possibility combines the previous two paths by trying to improve organic research, development, and production capabilities to domestically produce better quality weapons, while also purchasing key weapon systems to fill capability gaps.[88]

Modern weapons are expensive, and China is estimated to have spent about $20 billion on imports form Russia alone, with some $12 billion worth of weapons and equipment delivered by 2004[89]. High cost was the chief reason for the small quantities of weapons that the Chinese had bought until then, and it was the strongest rationale of the Deng Xiaoping leadership for rejecting military demands for more money. Its argument was that economic development had to precede military advances. By the early 1990's, this argument began to weaken. After a brief recession due to leadership differences that followed the suppression of the Tiananmen demonstrations, the Chinese economy began to rise rapidly.

As a consequence of the higher priority given military spending by the Chinese government, the share of GDP taken

88 Medeiros, 3.

89 Andrew Scobell and Larry Wortzel, *Shaping China's Security Environment: The Role of the People's Liberation Army*, Strategic Studies Institute: U.S. Army War College, (Carlisle: PA) 2006, 37.

by the official defense budget has increased from a low of 1.06 percent of GDP in 1996 to 1.66 percent in 2003.[90] Unofficial estimates place total expenditures within a higher range of 2.3 to 2.8 percent of GDP in 2003. However, all three of these estimates (1.66, 2.3 and 2.8 percent of GDP) are not extraordinarily large as an overall percentage of the nation's total economic output. During the 1980's most NATO and Warsaw Pact countries (other than the U.S. and the Soviet Union) spent from 2 to 3 percent of GDP on the military.[91] Therefore, the Chinese government has considerable room to increase military expenditures as an overall share of GDP.

That said, recent rates of increase in military spending are not sustainable. Between 1988 and 2003, officially reported spending on defense rose 9.8 percent per year on average in real terms.[92] If the Chinese government should attempt to keep defense budgets growing at 9.8 percent per year while the economy grows at projected rates, military expenditures would take between 6.2 and 76 percent of GDP by 2025. In other words, the share of military spending in GDP would rise 2.5 times over this period.[93]

Since the end of the Cold War, no government has sustained military expenditures of 6 percent or more of GDP, unless it was at war or it perceived an eminent threat to its national security as Israel does.[94]

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90 Crane, *Modernizing China's Military: Opportunities and Constraints*, 224.

91 Ibid.

92 Ibid.

93 Crane, 224.

94 Ibid.

F. HOW TO MODERNIZE?

1. Failure of Chinese Defense-Industrial Complex

A clear example of the systemic weakness and limitation of the Chinese Defense Industry involves the J-8 interceptor. This single-seat, twin engine aircraft began development in 1964, conducted its first flight test in 1969 and entered service in 1985. After 20 years of development and full scale production, the PLA Air Force still found the J-8 unsatisfactory and as late as 1989, dubbed it an "operational test aircraft."[95] China's domestic defense-industrial complex is unable to domestically produce advanced weapons and armament and continues to receive technical assistance from the Russians and the West. The J-8-II variant of the J-8 interceptor began service in the PLA Navy in 1992, but this later version was still sub-standard. After a total of almost 30 years of development and operational testing, the J-8 remains "a below-par combat aircraft—not yet the equivalent of a 1960s-era U.S. F-4 Phantom.[96]

At roughly the same time the Chinese were operationally fielding the J-8 Interceptor, the United States was delivering the F-117 Nighthawk Stealth Fighter and the B-2 Spirit Stealth Bomber, and just beginning the engineering and feasibility assessments for the F-22 Raptor. Operational since 1992, the F-22 represents state-of-the-art weapons technology and the U.S. version of adapting technology to the RMA. Chinese PLA modernization and RMA

95 Cole, "Advanced," 193.

96 Ibid.

efforts have a long road ahead. The inability to produce advanced weaponry isn't limited to just the fighter industry but to most of the entire Chinese defense-industrial complex. The only noticeable exception is the strategic nuclear weapons and missile division.[97]

A 2005 Rand report paints a similarly bleak picture about the Chinese shipbuilding industry. The report quotes a Chinese industry analyst:

> At the present time, China's shipbuilding industry has the following problems: obsolete production modes, yet-to-be formed effective technological innovation systems, lack of experienced scientific research personnel, and lack of administrative and management personnel, etc.[98]

According to a study commissioned by the United States Department of Defense, there are 84 critical areas to a domestic advanced arms industry. The only area where China has all the production capabilities is nuclear weapons and nuclear material processing. In virtually "all other areas of critical military technologies, China is extremely deficient."[99]

Chinese defense-related research and development (R&D) also suffers from endemic weaknesses. Two Western analysts estimate China's total military research and development budget annually at approximately US$2 billion.[100] The analysts concluded:

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97 Medeiros, 9.

98 Ibid, 134-135.

99 Cole, "Advanced," 172.

100 Karmel, 146.

> Given the poor state of Chinese defense R&D overall, this support amounts to little significant investment in the long-term health of the sector. The increasingly cost nature of advanced military R&D further limits the potential impact of these investments . . .The PRC's defense R&D base is deficient in several areas of technology considered to be on the cutting-edge of weapons development, including microelectronics, computers, avionics, sensors and seekers, electronic warfare, and advanced materials. In many disciplines, Chinese technological development has stagnated.[101]

Given the weak R&D in China's military, there is no appreciable transfer of technology from civilian to military use. Deng Xiaoping's overall "economy first" reform and prioritization put the CDIC infrastructure and investment on the back-burner. As a result, there was little currently existing high-tech civilian processes and factories that the CDIC could exploit. Transferring civilian technology for defense purposes is a significant challenge for all developing nations, but China is appearing to have an especially difficult time.[102] Chinese military R&D isn't getting the significant and sustained funding and political interest, and the lack of resources and appropriate oversight continues to debilitate domestic efforts to develop and produce advanced weaponry.[103]

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101 Karmel, 146.

102 Cole, "Advanced," 167.

103 Michael Bryant, "Modernized Dragon: China Aims for a Leaner, Rapid-Reaction People's Liberation Army," *Janes International Defence Review* 39 (2006): 34.

2. Joint Partnership

Joint development of advanced weapons systems among allies is fast becoming the norm for modern weapons research, development, and production. Even though the United States leads the world with its defense expenditures ($439 billion defense budget for 2007), The U.S. Air Force is jointly developing the next generation F-35 Joint Strike Fighter with the United Kingdom and other key allies. With a development cost of US$35 billion, Great Britain is contributing 10 percent, Italy and Netherlands is each contributing 5 percent, while Denmark, Norway, Canada, Australia and Turkey are each contributing 1 to 2 percent.[104]

In addition to sharing the cost burden, joint ventures effectively reinforce the common principles and shared national interests of the developing nations. To capture the synergistic effect of cost-sharing and common national interests, one expert asserts:

No single vendor or country has the resources to invest individually to attain self-sufficiency in creating weapon platforms of the next generation. The future well being of nations will depend on their integrating their armament industries effectively between countries with shared perceptions of their national interests by creating joint ventures.[105]

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104 Jane's Online Research, "Lockheed Martin F-35 Joint Strike Fighter." http://www8.janes.com/ (Accessed Aug 28, 2007).

105 Bharat Verma, "Military Industrial Complex: Crafting a Winning Strategy," *The Consortium of Indian Military Websites*. http://www.bharat-rakshak.com/SRR/Volume12/bharat.html (Accessed Sep 3, 2007).

3. Foreign Procurement

Given China's established weakness and limitations in domestic production of advanced weaponry, China is actively pursuing and purchasing foreign military technology. The recent sustained economic growth directly translates into larger defense budgets, and China appears to be taking full advantage of its growing wealth and the availability of foreign technology "to leap into current and next generation capabilities for the PLA."[106] In 1996, China supported seven fighter and attack aircraft programs most of which required foreign technical advice and guidance. By comparison, the United States can barely afford three new fighter programs, and in 1997, China had the financial resources to purchase yet another, the SU-30 attack aircraft.[107]

The officially reported Chinese defense budget was US$14.6 billion, over 40 percent of which (US$6 billion) was earmarked for defense procurement.[108] At that level of funding, China could afford to purchase several dozen combat aircraft, five to ten surface warships, two to five submarines and sea mines.[109] Additionally, a study by the Defense Science Board calculated that a developing nation could acquire a reasonably high capacity for high-tech/RMA-

106 Richard Fisher, "Foreign Arms Acquisition and PLA Modernization" in *China's Military Faces the Future* James Lilley and David Shambaugh, eds. (American Enterprise Inst: Washington DC, 1999) 85.

107 Ibid.

108 Richard Bitzinger, "Just the Facts, Ma'am: The Challenge of Analysing and Assessing Chinese Military Expenditures" *The China Quarterly*, no. 173 (Mar 1, 2003), 164-175 http://www.proquest.com/ (Accessed Aug 29, 2007).

109 Gill, 221.

type warfare with an investment of only $20 billion over a 10 year period, or just $2 billion per year.[110]

G. CONCLUSION

The PLA modernization effort is critical to upgrading its military capability and securing China's increasingly global national interests. In 2007, Beijing increased its defense budget by 18% for modernization efforts. This is a significant step for the PLA since it validates their concerns of diminishing funds and increasing military expectations. Like every military it depends upon government funding for its very existence. China's booming economy is allowing China to expand discretionary expenditures such as military modernization, however, China's economy still isn't as efficient as it could be. The PLA modernization program depends upon significant and sustained defense budget expenditures to ensure multi-year programs and reforms aren't cut or under-funded during economic recessions. Arguably, the greatest "drag" on the Chinese economy is the inefficient banking sector which is preventing China from fully exploiting its capital potential.

110 Bitzinger, 174.

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III. CHINESE BANKING SYSTEM

In 1978, the Third Plenary Session of the 11th National Congress of the Chinese Communist Party opened China to the rest of the world by launching widespread economic reforms. This section will outline highlights of those reform measures, concentrating on banking reform and the concomitant shedding of the inefficient SOEs that stimulated so many of the reforms.

A. ECONOMIC STABILITY FIRST

After the Chinese Communist Party consolidated power, economic stability was one of their highest priorities. The party leadership recognized that one of the significant factors leading to the downfall of the Chiang Kai-Shek and the Kuomintang government was their inability to control hyperinflation. During the winter of 1948-49 much of China that remained under Nationalist rule "had been reduced to a barter economy."[111] The Communist party leadership recognized the urgent need to quickly resurrect the economy and aggressively attacked the systemic problems. They created a new currency and nationalized the banks to try and spur economic recovery, since "nothing could buy the communists the support of the urban populace more rapidly than taming inflation and getting the economy going again.[112]

111 Kenneth Lieberthal, *Governing China: From Revolution Through Reform*, (New York, NY: W.W. Norton & Co., 2004), 38

112 Ibid.

China’s centrally planned economy needed a convenient mechanism to finance the party leadership’s priorities. The state budget played the dominant role in funneling national savings toward investments. As a result, China’s banking system as a financial intermediary was far more limited than in the west.[113] As an organization, “China's pre-1979 banking system was characterized by its monolithic, centralized, and hierarchical structure. Since specialized banks were few, most of the functions and authority in the banking system were concentrated in the People's Bank of China.”[114]

B. FIRST STAGES OF BANK REFORM

Deng Xiaoping’s economic reforms during the latter part of the 1970’s were the enabling action that allowed the Chinese economy to prosper. His phrase “socialism with Chinese characteristics” was a marked break from Socialism’s traditional ideology of state-owned means of production. While the existence of free-market enterprises and privately owned production facilities are inconsistent with socialist ideas, his reforms significantly raised the Chinese standard of living. When Deng Xiaoping “came to power in 1978, per capita peasant income was 132 yuan or $66, and one quarter of China’s rural population had a per capita income of less than 50 yuan. The urban population fared a little better

113 Hiroyuki Imai, “China’s New Banking System: Changes in Monetary Management” in *Pacific Affairs*, Vol. 58, No. 3. (Autumn, 1985), 451-472.

114 Ibid.

with an average of 383 yuan. [115] In 2006, per capita income had risen to 58,295 yuan or $7,700 U.S. Dollars.[116]

During one of his many speeches, Deng Xiaoping uttered the famous phrase “No matter if it is a white cat or a black cat; as long as it can catch mice, it is a good cat.” His intent was to improve the economic condition of his country and he wasn’t averse to incorporating capitalist ideas to improve China’s economic footing. This willingness to be flexible and open to new ideas isn’t the same as abandoning socialism or China’s significant history. Instead, this realist approach is an explanation; a methodology to try and predict future economic policy based on the assumption that Chinese policy isn’t strictly beholden to Socialist doctrine for a centrally planned economy.

Beginning in 1978, economic reforms addressed four major components: decentralization of economic administration; partial adoption of free-market mechanisms; wider use of economic tools (such as taxes, credit, interest rates) instead of administrative edicts in economic management; and partial liberalization of private enterprises.[117] To accomplish those reforms the party leadership decided to significantly increase the role of the banks in China’s growth. Beijing’s leaders especially wanted the reformed banking system to “provide effective and flexible methods for countering inflationary pressures” which were expected to result from the fundamental changes

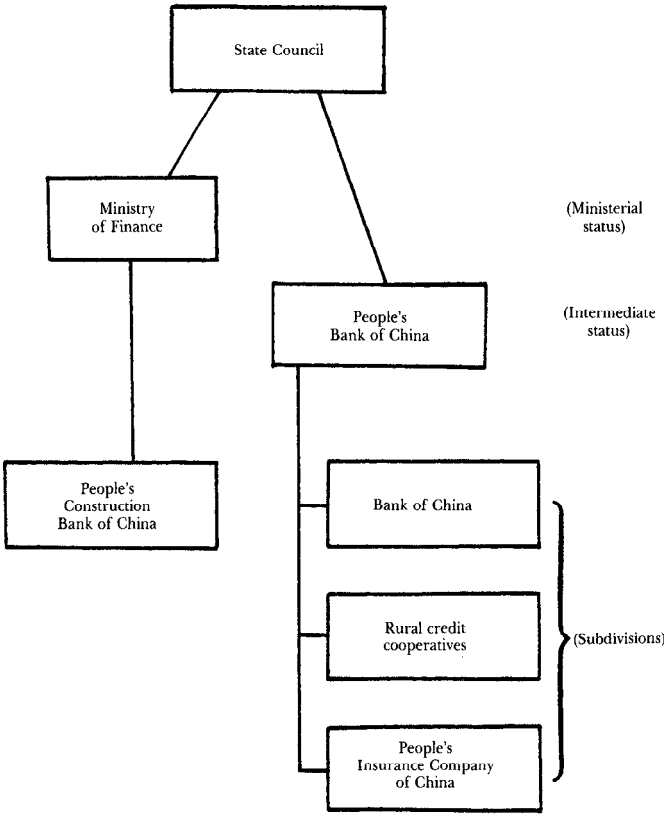
115 Roderick MacFarquhar, *The Politics of China, The Eras of Mao and Deng, 2d Ed*. (Cambridge, England: Cambridge Univeristy Press, 1997), 530.

116 CIA World Factbook, China, Available on-line https://www.cia.gov/library (Accessed Aug 31, 2007).

117 Imai, 460.

to China's economic structure.[118] Figure 3.1 and 3.2 graphically portrays the relatively simple organizational structure of the Chinese banking system pre- and post reform.

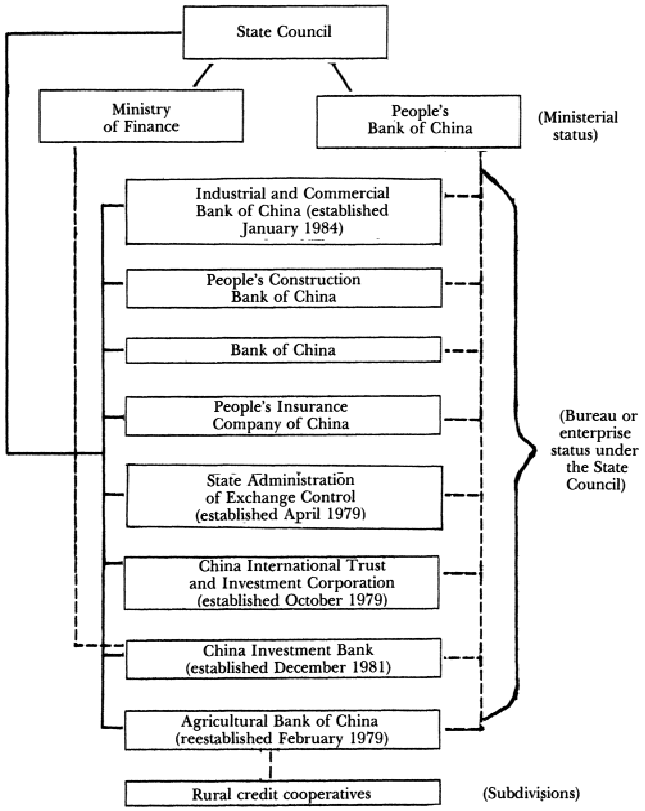
Figure 3.1 Pre-1979 Banking System[119]



118 Imai, 471.

119 Ibid, 453.

Figure 3.2 The Banking System After Decentralization[120]


State Council
Ministry of Finance
People's Bank of China
(Ministerial status)
Industrial and Commercial Bank of China (established January 1984)
People's Construction Bank of China
Bank of China
People's Insurance Company of China
State Administration of Exchange Control (established April 1979)
China International Trust and Investment Corporation (established October 1979)
China Investment Bank (established December 1981)
Agricultural Bank of China (reestablished February 1979)
Rural credit cooperatives
(Bureau or enterprise status under the State Council)
(Subdivisions)

Under post-reform guidance, the new state controlled banks (SCBs) – Industrial and Commercial Bank of China (ICBC), the People's Construction Bank of China (PBOC), the Bank of China (BOC) and the Agricultural Bank of China (ABC) were allowed to engage in a wider range of lending activities which strengthened the banks overall financial intermediary functions.[121] However, the increased lending ability resulted in free-flowing loans to state-sanctioned programs and projects with high central-planning policy priority.

120 Imai, 471.

121 Ibid.

1. Problem of State Owned Enterprises (SOEs)

Nicholas Lardy succinctly defines the problem of bank lending to SOEs: "The insatiable demand of state-owned enterprise for credit lies at the root of China's macroeconomic instability in the reform period."[122] The often used phrase, "iron rice-bowl" refers to the cradle-to-grave social support provided by SOEs to its workers. The enterprises provided their employees with medical care, housing, subsidized heating, and generous pensions.[123] City Steel is just one example of the type of benefits provided by the SOE. Plant managers would build subsidized housing for newly married workers and employ workers' children, even though the company couldn't afford the subsidized housing and the plant already had far too many workers.[124] So instead of a profit-maximizing orientation, SOE executives had to also contend with heavy social obligations to care for workers, excess manpower, and outdated equipment.

2. Reforms of SOEs

Despite on-going reforms to privatize SOEs, they remain a significant component of the Chinese economy. In 1994, China had more than 102,000 SOEs, which represent only 1 percent of the total number of Chinese enterprises, but employed 75 percent of the urban industrial workforce and consumed 57 percent of new investment and 70 percent of all

122 Lardy, "*China's Unfinished Economic Revolution*," 137.

123 Robert Weller, Jiansheng Li, "From State Owned Enterprise to Joint Venture: A Case Study of the Crisis in Urban Social Services" in *The China Journal*, No. 43. (Jan., 2000), 83-99.

124 Ibid, 84.

bank loans.[125] After more than a decade of reforms, 50 percent of China's SOEs reported losses, and it was estimated that a further 33 percent actually incurred losses despite reporting profits.[126] In 2006, these inefficient legacies of the rigid, communist, centrally planned economy still account for 30 – 40% of the Chinese economy.[127] These enterprises function very differently from private and publicly owned businesses since they don't respond to market signals and/or Beijing's policies to steer its markets.[128] As remnants of the "iron rice-bowl" of state supplied employment, health-care, pension the vast majority of urban peasant workers have come to depend upon state factories for their cradle-to-grave requirements.

But the inherent inefficiencies of these factories are immediately obvious at the highest levels of the Communist party leadership, and presents the leadership with competing priorities: on the one hand, the leadership understands the need to shed these weights and aggressively pursue economic growth, and on the other hand, there is the breakup of the social contract of the state providing for the worker's needs. The human face of the privatization effort is considerable. Since 1997, over 60 million jobs were lost from the dismantling of SOEs.[129]

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125 Sharon Moore and Julie Wen, "Reform of State Owned Enterprises and Challenges in China" Available on-line http://www.emeraldinsight.com1746-8779 282 (Accessed Sep 15, 2007).

126 Ibid, 284.

127 Stephen Roach, "Soft Landing made in China." Morgan Stanley, Aug 22, 2006, http://www.morganstanley.com http (Accessed Jul 17, 2007).

128 Ibid.

129 Stephen Roach, "The Coming Rebalancing of the Chinese Economy." Morgan Stanley, Mar 27, 2006, http://www.morganstanley.com(Accessed Jul 17, 2007).

The break-up of SOEs need to continue, but that initiative has created another set of thorny problems that Beijing must attack, namely high personal savings and low consumer consumption. The Chinese national savings rate is an astounding 50%. One of the drivers of this incredible savings rate is the dismantling of SOEs that previously provided jobs, income, shelter, medical care, education, and retirement support. As this social safety-net is dismantled it is fueling a powerful trend of precautionary savings to compensate for the Chinese way of life that has been fundamentally altered.

Many experts agree that the legitimacy of the ruling Chinese Communist Party is directly tied to China's sustained superior economic growth. Economic ascendence, and the resulting domestic pride and international prestige that it engenders allows the communist party to avoid the inherent contradictions of communism and private property, socialism and free market enterprise. The booming economy also serves as a domestic diversionary tactic by allowing the communist leaders to point to the very visible successes of its reform measures and forestall social unrest that usually accompanies massive unemployment.

C. EXCHANGE RATE REVALUATION

On 21 July 2005, after years of pressure from the United States and other ASEAN countries, the Chinese government announced that the country's exchange rate would move to a managed floating exchange rate based on market supply and demand to an *unspecified* basket of currencies

(emphasis added).[130] By not specifying which basket of currencies it will value the yuan against, Beijing is hedging its strategy to allow it to moderate an immediate strengthening of the yuan. With this reform, the yuan switched from an artificial peg of 8.21 yuan against to the U.S. dollar to a more market based valuation. As of August 2007, the yuan has appreciated to 7.54 yuan to the U.S. dollar.

This revaluation has significant symbolic value for the United States. It announces Chinese willingness to accede to global pressures for equitable trade, and represents Chinese acceptance of its responsibilities to help maintain stability of the global economy. At the same time, the revaluation is not so large as to significantly damage the profitability of Chinese exports.[131]

D. CHINESE HYPER-GROWTH DUE TO UNRESTRICTED BANK LENDING

The March 17, 2007 China Daily reported that in order to contain and manage its explosive growth, The People's Bank of China raised key lending and savings interest rates for the third time in 11 months in order to curb inflation. The article goes on to quote Glenn Maguire, chief Asia economist at Societe Generale SA in Hong Kong, who forecasted two more rounds of interest rate hikes for this

130 Jingtao Yi, "Changes in China's Exchange Rate Policy and Future Policy Options." *China: An International Journal* 4, no. 2 (2006): 302-313, http://muse.jhu.edu, 302.

131 Barry Eichengren, "China's Exchange Rate Regime: The Long and Short of It." Available on-line http://www.econ.berkeley.edu/~eichengr/research/short.pdf 3.

year alone.[132] However, recent history shows that these monetary policy measures to restrict the money supply will prove fruitless since independent local branches of nationwide banks and largely autonomous regional banks continue to push loans to promote growth in their local regions.

Hyper-growth in eight of China's 31 regions have accounted for 72% of total Chinese GDP growth since 2000, despite containing only 40% of China's total population.[133] Local leaders have very pressing and immediate concerns of job creation for their local constituents, and distant Beijing's policies to moderate growth are not often enthusiastically received. While China's aggregate GDP growth rate may be 10% as often quoted, the dispersion across the vast nation is fueling provinces of haves and have-nots, with some regions experiencing near 20% growth while rural areas suffer stagnant growth.[134] China's big four banks collectively have over 75,000 branches, underscoring the autonomy of local banks to provide direct lending, and thereby reducing the efficacy of monetary policies to tighten the money supply.[135] Any attempts to restrict lending via the money supply will have uneven effects across China, amidst already very uneven growth between the coastal areas and the rural interior regions.

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132 China Daily, "China Raises Interest Rates to Slow Inflation," www.chinadaily.com.cn/china/2007-03/17/content_830297.htm (Accessed Aug 29, 2007).

133 Stephen Roach, "Soft Landing made in China." Morgan Stanley, Aug 22, 2006, http://www.morganstanley.com (Accessed Jul 17, 2007).

134 Stephen Roach, "China's Great Contradiction." Morgan Stanley, Jun 30, 2006, http://www.morganstanley.com (Accessed Jul 17, 2007).

135 Ibid.

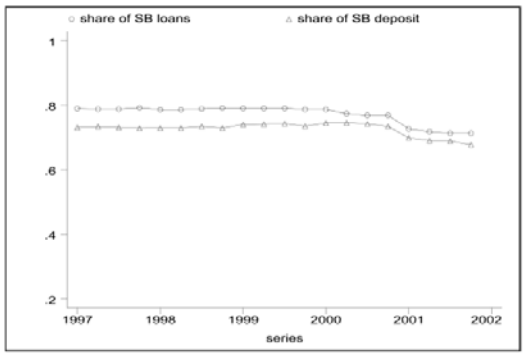
Additionally, it could potentially take even stronger monetary tightening measures to accomplish a given policy objective in this decentralized and fragmented banking system than would be the case if those largely autonomous banks were tied more closely together.

E. PROBLEM OF NON-PERFORMING LOANS (NPLS)

The government not only fully owns the Big Four State Banks, but also directly or indirectly controls 95 percent of the assets of most of the other 75,000 local banks through shares held by local municipalities and SOEs that remain outside the banking sector.[136] Because of this tremendous concentration of resources, the state commercial banks and the policy banks completely dominate the Chinese financial sector. Figure 3.3 shows the high concentration of state bank loans as an overall percentage of the total loans for the 5 year period from 1997-2001.

136 Matthias Bekier, Richard Huang, Greg Wilson, "How to Fix China's Banking System," *The McKinsey Quarterly*, 2005, no. 1.

Figure 3.3 Share of State Bank Lending and Deposit to Total Lending and Deposit, 1997-2001[137] (qtrly)
Note: 1 = 100%



In order to keep stoking the fires of the Chinese economy (fixed asset investments and export led growth), in August 1998 China shifted from a policy of "tightening to one of macroeconomic stimulus, through increased fiscal outlays" and increased lending by state banks.[138] In a curious turn of circumstance, the tremendous growth in China's GDP and the successful banking organizational reshuffle and reforms fueled the next tremendous challenge of non-performing bank loans. Since the government in effect owns the entire financial system, controls the price of capital, and provides an implicit guarantee that bank losses will be funded by the state there is no "moral hazard."[139] As a result, both bank managers and borrowers have a tremendous incentive to take excessive risks on questionable business activities.

137 Figure from Victor Shih, "Dealing with Non-Performing Loans: Political Constraints and Financial Policies in China", *The China Quarterly,* no. 926 http://journals.cambridge.org (Accessed Jul 18, 2007).

138 Lardy, *Integrating China,* 18.

139 Ibid, 18.

Additionally, the successful ongoing reforms to privatize or dismantle SOEs created significant unemployment and social pressures on senior Chinese officials. Beijing's gradualist approach to economic reforms meant that many loans issued during the late 1980s and through the 1990s were issued on a non-commercial basis. Instead, banks issued credit to pay workers' wages and to fund pension obligations.[140] Obviously, the practice of securing credit to pay salaries and pensions negatively affected profitability and added more fuel to the NPL fire. Near the height of the NPL problem in 1997, unofficial estimates put the NPL ratio as high as 65% of total bank lending.[141]

1. Asset Management Corporations (AMCs)

In 1999, The Ministry of Finance (MoF) established four AMCs to address the growing problem of NPLs. Each AMC would align with one of the Big Four State Banks and assume the RMB 1.39 trillion book value of the bank's NPLs in order to improve the overall credit-worthiness of the Big Four Banks. The MoF created Cinda (for China Construction Bank), China Orient (for the People's Bank of China), Huarong (for the Industrial and Commercial Bank of china), and Great Wall (for Agricultural Bank of China).

To finance this transaction, the People's Bank of China (PBoC) loaned cash to the AMCs and the AMCs issued 10-year bonds to the Big Four Banks equal to the original NPL

140 David Pierce, Lawrence Yee, "China's Bank Asset Management Companies: Gold in Them Thar Hills?" *Topics in Chinese Law*, http://www.omm.com/webdata (Accessed Sep 15, 2007).

141 Jonathan Anderson, "How to Think About China" UBS Investment Research, Asian Economic Perspectives, Available on-line http://www.ubs.com/economics (Accessed Sep 15, 2007).

exposure. The net effect was that the "credit risk was passed" directly back to the PBoC.[142] Because the MoF owns all the aforementioned institutions, there was no net cost to the state. The credit risk and financial exposure of the NPLs were shifted from the Big Four State Banks to the central PBoC through the AMCs which significantly strengthened the balance sheets of the banks.

2. On-going Challenge of NPLs

At the end of 2004, the Chinese government estimated that the NPL ratio for major commercial banks in China, including the Big Four state-owned banks amounted to RMB 1.7 trillion (US$240.7billion) or 13.2%, down 4.6% over the year. Bank of China independently reported an NPL ratio of 4.55% as of October 2004, which is down from 5.16% at the end of September 2004, and 16.3% since the beginning of the year. China Construction Bank reported an NPL ratio of 3.74% at the end of September 2004, which is the lowest amount among the Big Four State banks.[143]

At the end of 2004, the China Bank Regulatory Commission reported an overall NPL ratio of 13% for the state commercial banks and joint-stock banks, and a ratio of 23% for rural credit cooperatives.[144] As is often the case with officially reported Chinese statistics, private estimates of the NPL ratios are much higher. Independent market estimates by credit rating agencies, international

142 Phillip Gilligan "China NPLs: Trends and Future Issues" Available on-line http://www.deacons.com.hk/eng/knowledge/knowledge_225.htm (Accessed Sep 15, 2007).

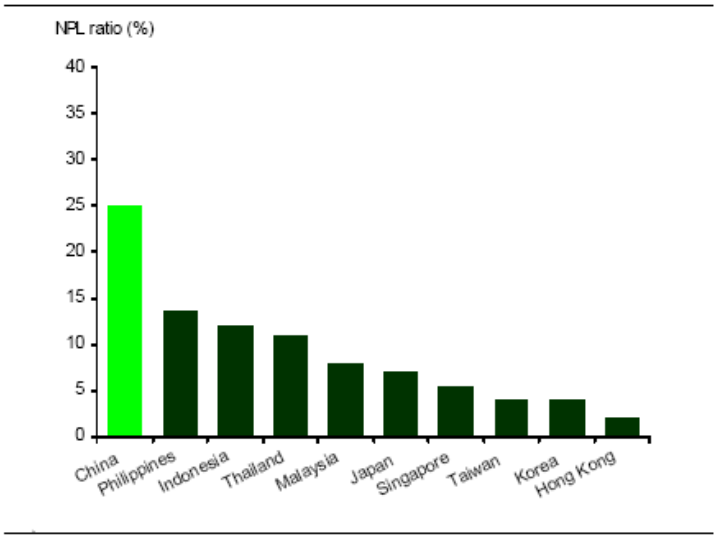
143 Gilligan, 4.

144 Anderson, 84.

institutions and academic analysts generally agree the NPL ratio for commercial banks is 25% and 30% for smaller credit institutions.[145]

Assuming a 25% NPL ratio means that Chinas currently has the worst banking system in all of Asia in 2005. As a point of reference, Figure 3.4 shows the estimated NPL ratios for 10 other Asian nations and the estimated ratio for China is twice as high as its regional neighbors.

Figure 3.4 Current NPL Ratios in Asia[146]



Because bank officials approved loans according to central planning priorities which stressed rapid economic expansion and export-led GDP growth it isn't overly surprising that many of the loans went bad. Another compelling problem of the NPLs is that because of the heavy indebtedness of the SOE sector, firms often can only pay

145 Anderson, 84.

146 Ibid, 85.

nominal amounts of interest without any hope of ever paying off the full principal. Therefore, one can easily (and safely) presume that the true "impaired asset" figure of the SOE loans in jeopardy is much higher than the actual NPLs with overdue interest payments.[147] It is important to note that while the 25% NPL ratio is still very high and there is still much room for improvement, the ratio dropped from over 60% in approximately 10 years.

F. BANK LENDING AND OVERINVESTMENT STILL FUELING HYPERGROWTH

Beijing's tremendous GDP growth stems from the realization that globalization is an irreversible trend and the best way to deal with the inevitable dislocations of an interdependent globalized economy is to merge its policies with the international economic system.[148] The reforms started by Deng Xiaoping started this merger with the globalized economies, but Beijing still has a plethora of options to reform its economic policies in order to try and sustain its economic growth. China's economy is in serious danger of overheating.

In 2005, fixed asset investment hit 45% of Chinese GDP and should exceed 50% of GDP in 2006.[149] China's booming economy is driving this capital investment with modernization, urbanization and industrialization. However

147 Anderson, 85.

148 Sheng Lijun, "China-ASEAN Free Trade Area: Origins, Developments and Strategic Motivations." *Institute of Southeast Asian Studies*, no 1 (2003): 1-24.

149 Stephen Roach, "China's Great Contradiction' Morgan Stanley, Jun 30, 2006, http://www.morganstanley.com/views/gef/archive/2006/20060630-Fri.html (Accessed Jul 17, 2007).

that staggering investment rate even surpasses Japan and South Korea's investment ratios of 40% in their respective booming periods.[150]

These capital investments and exports are the two sectors of China's economy that now account for more than 80% of total Chinese GDP and collectively, these two sectors raced ahead by nearly a 30% year-over-year rate in the second quarter of 2006.[151] The scale of its capital investments is staggering and unlike anything the world has seen in recent memory. "From 200 to 2005, Chinese fixed investment surged from about $400 billion to $1.1 trillion – a 680 billion increase that was nearly 70% larger than the U.S. investment delta of about $400 billion realized over the same period."[152] Stephen Roach, Chief Economist of Morgan Stanley summarizes this situation succinctly, stating "this is not a sustainable outcome for any economy."[153] The most effective mechanism for cooling down a racing economy is to contract the money supply through monetary policies. However, Beijing's efforts are stymied since their decentralized banking system prevents the full effects of central monetary policies to fully disperse throughout the economy.

150 Stephen Roach, "China's Great Contradiction' Morgan Stanley, Jun 30, 2006, http://www.morganstanley.com/views/gef/archive/2006/20060630-Fri.html (Accessed Jul 17, 2007).

151 Stephen Roach, "China's Control Problem." Morgan Stanley, Jul 21, 2006, http://www.morganstanley.com/ (Accessed Jul 17,2007).

152 Stephen Roach. "Scale and the Chinese Policy Challenge." Morgan Stanley, Jun 19, 2006, http://www.morganstanley.com/ (Accessed Jul 18,2007).

153 Ibid.

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IV. BANKING REFORM TO SUSTAIN ECONOMIC GROWTH

Previous sections established the national strategic intent to modernize the PLA. Also, Beijing has expressly stated their adoption of RMA and senior party and military leaders recognize the high-technology requirements of modern military forces. To modernize and equip the PLA with the advanced arms and tactics necessary for an RMA continued banking reform is an essential step to secure the necessary funding.

This section will address the importance of banking reform as a methodology to grow the Chinese economy. The beginning sections will outline the scope of the current defense budget and project how much of the central budget should be devoted to defense. Later sections will specifically address components of banking reform such as improving corporate governance, and introducing foreign competition as essential catalysts for improving banking performance. This section will close with capturing the scope of the bank recapitalization challenge, and reiterate how aggressive banking reforms will contribute to PLA modernization efforts.

A. HOW MUCH MONEY IS NEEDED?

Figure 4.1[154] shows the broad range of estimates of Chinese military expenditures. Because of the opaqueness of official Chinese reporting, different assumptions must be made in order to try and fully capture total defense

154 Bitzinger, 174.

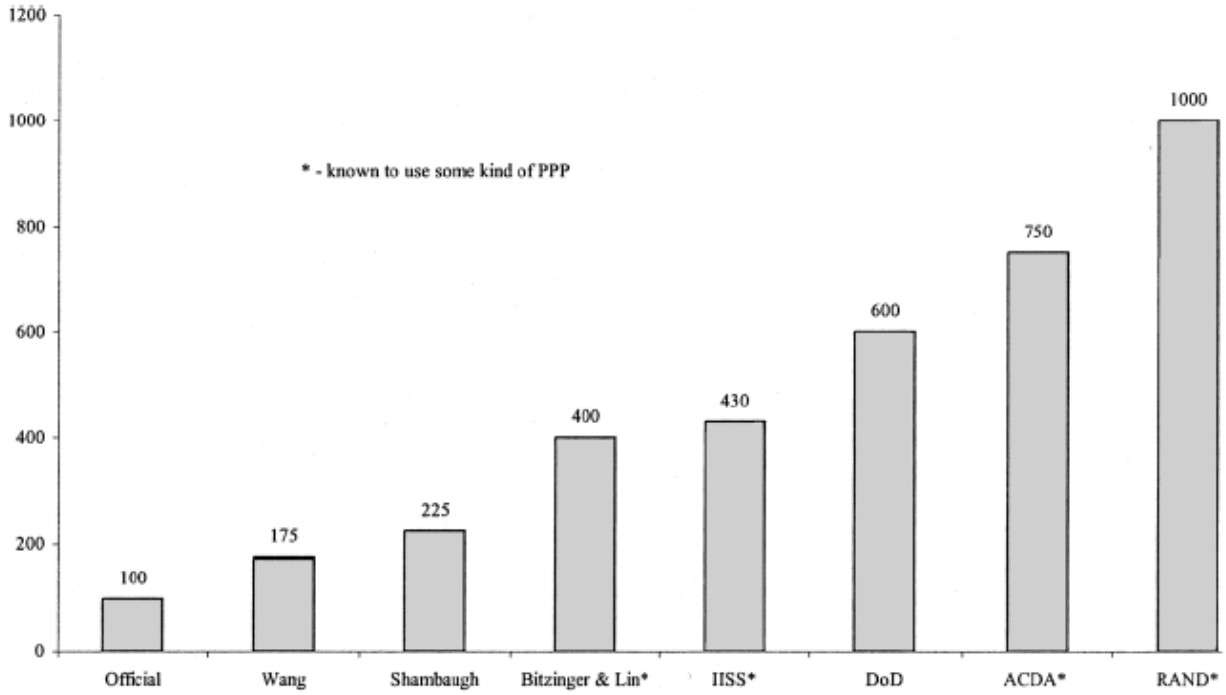
spending. For example, it is widely known that China's "backward, bloated and inefficient military-industrial complex operates at a loss" and that official defense budgets do not include the costs of direct subsidies to Chinese defense industries or forced loans by state-owned banks to arms factories.[155] It is also unclear how many PLA-owned businesses were actually sold off as required by the 1998 Divestiture Act (most PLA-run farms were exempted, for example), how many are still secretly owned through dummy partnerships, and how many divestiture orders were simply ignored.[156] Finally, some type of purchasing power parity (PPP) multiplier must be used to gauge defense spending since Chinese "defense spending basket" costs much less than in the West. Through low pay and poorer living standards the PLA saves money on personnel costs, while lower wages at defense industries artificially reduces the true cost of weapons procurement.[157] These are just a few of the reasons Western estimates of Chinese defense spending vary as much as they do.

155 Harlan Jencks, "COSTIND is Dead, Long Live COSTIND! Restructuring China's Defense, Scientific, Technical and Industrial Sector" in *The People's Liberation Army in the Information Age*, Cheng Ming (Hong Kong), Nov 1, 1996, 54-57.

156 Mulvenon, *Soldiers of Fortune*, 124

157 Bitzinger, 170.

Figure 4.1 Western Estimates of Chinese Military Expenditures (official budget = 100)[158]



Regardless of the particular path of PLA modernization,[159] significant and sustained defense expenditures are needed. Assuming even moderate GDP growth, the increased government revenues will have to be used to bail out state-owned banks, protect and rescue the environment, support the unemployed, and provide all the services of the 200 million or so rural-urban migrants.[160] These pressing societal demands will constrain growth in all other budget categories including defense.

158 Bitzinger, 170.

159 Internal Development, Joint Venture, Foreign Procurement: See Chapter 2

160 Crane, 89.

It wouldn’t be unreasonable to argue that China (along with every military in the world) could use more funding. Also assuming there is no drastic change to China’s security environment to precipitate a dramatic increase in defense spending, what are the projected levels of defense spending that China will have to pay for? Table 4.2 outlines a RAND projection of future Chinese military spending.

Table 4.1 RAND Projections of Chinese Military Spending Through 2025[161]

	Billions of 2001 Renminbi				
	2003	2010	2015	2020	2025
Maximum Projection	314.5	702.7	1001.7	1307.4	1633.3
Mid-Range Projection	256.6	416.6	531.7	646.9	750.0
	Percentage of GDP				
Maximum Projection	2.8	4.0	4.3	4.6	5.0
Mid-Range Projection	2.3	2.3	2.3	2.3	2.3
Ratio between maximum and mid-range	1.23	1.73	1.88	2.02	2.18

These projected expenditures assume the Chinese government will choose to also substantially increase expenditures on education, health, pensions and an improved social safety net. They also assume that to maintain their global credit-worthiness, China will be compelled to convert currently unrecognized liabilities into government debt and service those debts with market interest rates. Even with all these competing demands, military expenditures that require approximately 2 percent of GDP are acceptable.[162] An upper limit of 5 percent of GDP devoted to defense

161 Crane, 228.

162 Scobell and Wortzel, 128.

expenditures would create serious friction with the increasing societal demands on government spending.

1. Defense Expenditures Possibly "Crowded Out" By Societal Spending

PLA modernization is better served by significant and sustained defense budget spending versus inconsistent, reactionary funding based on a perceived threat, or lack thereof. High levels of funding, year-over-year signifies national strategic intent, and the commitment of scarce national resources to fulfilling that intent. Although the probability of economic collapse is slim, consistent defense spending could be threatened by economic stagnation. During periods of slow or negative growth, societal demands for increased spending on pensions, health care and other desperately needed social programs would increase along with the rise in unemployment and other deleterious effects of prolonged economic stagnation. Fear of internal unrest could result in a ferocious crackdown (as in the 1989 Tiananmen Square protests), or a higher prioritization of domestic spending to ease those social tensions which would crowd out defense spending on PLA modernization.

B. IMPROVING CORPORATE GOVERNANCE

When asked what are the key issues and challenges facing banks, Chairman of the China Banking Regulatory Commission Liu Minkang stated, "Improving corporate governance is the key challenge facing us in relation to the banks and a critical issue is establishing the boundary between the board of directors and the executive committee.

We are just at the beginning and we need more time to collect more accurate data."[163]

Effective corporate governance and reducing state influence in lending decisions is a critical step to improving banking efficiency. Sound corporate governance procedures are "the first line of defense in managing bank risk" since it ensures that authorized, accountable people make rational, transparent decisions and establishes checks and balances to minimize conflict of interest, collusion and fraud.[164]

Many Chinese banks lack even the most basic components of good governance. While poor lending decisions to non-performing SOEs represent one category of inefficient banking processes, an entirely different category of poor banking practices is fraudulent lending. At one unspecified bank, fraud was involved in about 33 percent of new nonperforming mortgages (as opposed to less than 1 percent in most developed countries). Many loans had fictitious addresses, with no property as collateral, while some mortgage holders received money for properties they didn't own.[165] In another highly publicized case, a Chinese court convicted Cheng Kejie, former vice chairman of the Standing Committee of the National People's Congress, China's

[163] Stephen Timewell, "Asia: China – Chinese Banks Need Foreign Competition" *The Banker*, Dec 1, 2005. http://www.proquest.com (Accessed Sep 13, 2007).

[164] Bekier, Huang, Wilson, 54.

[165] Ibid.

parliament, to death for authorizing fraudulent loans and amassing $US 5 million in bribes and kickbacks.[166]

Despite tough measures, current reforms to improve corporate governance are beset with political influence, and potential for conflicts of interest. As previously mentioned, China's AMCs are the specific reform vehicles through which China's banks would recapitalize, improve solvency, and showcase China's serious efforts to embrace WTO guidelines and prepare for foreign competition. Yet the AMCs remain as state-owned, non-banking financial institutions that must answer to a multitude of political agencies while attempting to act and conduct business as commercial entities. Members from the China Banking and Regulatory Commission, the Ministry of Finance and the China Securities Regulatory Commission sit on the Supervisory Board of the AMCs, all "with separate agendas."[167] Perhaps the most controversial matter regarding corporate governance at the AMCs is the fact that the President of the four state-owned central banks also serve as the Party Secretary – a key position – at each of the four corresponding AMCs.[168]

While Beijing is certainly attacking the problem of poor governance, the adopted measures focus on the largest banks, and specifically, those banks scheduled for the early rounds of going public through initial public offerings

166 Ted Plafker "Chinese Ex-Official Sentenced to Death; Government Seeks to Make Example of Corruption Case" *The Washington Post*, Aug 1, 2000, http://www.proquest.com/ (Accessed Sep 13, 2007).

167 Min Xu, "Resolution of Non-Performing Loans in China" Leonard Stern School of Business: Glucksman Institute, NY University 2005), http://w4.stern.nyu.edu/glucksman/docs/Xu_2005.pdf (Accessed Aug 29, 2007).

168 Ibid.

(IPOs). Gaining tighter control of a handful of very large, high profile banks is much simpler than transforming the corporate governance in the 120 or so smaller regional and local banks and the nearly 30,000 credit co-ops which command 40 to 50 percent of total banking assets in China.[169] These smaller institutions are especially prone to corrupt lending practices but harder to regulate and audit since they are so numerous and geographically dispersed.

C. FOREIGN COMPETITION FOR BANKS

China's bank reform strategy includes listing Chinese banks on foreign stock exchanges to impose market pressures and discipline on managers, directors and board members. The intent was to "improve the accuracy and transparency of their reporting to international standards and to subject bank performance to market appraisals of efficiency and profitability."[170] The overall intent was to thrust Chinese banks onto the world stage and push management toward emphasizing rates of return on assets and increasing profitability.

Unfortunately, the evidence does not show that the initial rounds of Chinese bank IPOs provided strong stimulus for other banks to adopt strong commercial lending practices. An International Monetary Fund working paper concluded, "In the 1997-2004 data, it is difficult to find solid empirical evidence of a strong shift to commercial

169 Bekier, Huang, Wilson, 3.

170 Wendy Dobson, Anil Kashyap, "The Contradiction in China's Gradualist Banking Reforms." *Brookings Papers on Economic Activity 2006*, no. 2 (2007): 103-162.

orientation by [state-controlled banks]. The pricing of credit risk remains rather undifferentiated, and bank lending continues to be driven by availability of funds and does not appear to take enterprise profitability into account when making lending decisions – the four large State Controlled Banks continue to lose market share in provinces with more profitable enterprises.[171] Allowing greater foreign ownership of banks would introduce new capital into the industry and remove moral hazards by taking the state central planners completely out of credit decisions.

D. COST OF BANK RECAPITALIZATION

The total cost of bank restructuring may eventually approach 30 percent of GDP.[172] Losses of this magnitude are not overly surprising since NPLs are believed to have accounted for as much as 40 to 50 percent of loans outstanding at their peak in the 1990s.[173] Banking reform, as a distinct subcomponent of all economic reforms, are aimed specifically at improving the efficiency of capital resource allocation within the economy. It is important to note that a financial shock such as a recession or economic stagnation wasn't the catalyst for change; rather the motivating factor was decreasing economic efficiency.

The central government initiated several measures to recapitalize the banks including bond issuance, foreign

171 Richard Podpiera, "Progress in China's Banking Sector Reform. Has Bank Behavior Changed" *IMF Working Papers* no. 71 (Mar 2006) 1 – 23. http://www.proquest.com/ (Accessed Sep 13, 2007).

172 Guonan Ma, "Who Pays China's Bank Restructuring Bill?" *Working Papers 2006-04, CEPII Research Center* (Feb 2006) http://ideas.repec.org (Accessed Sep 13, 2007).

173 Lardy, "China's Unfinished Economic Revolution," 144.

exchange injections, and of course, creating the AMCs. While the efficacy of those recapitalization measures are still debated, another daunting issue is the quality of the loans granted since those measures took place. Since many of the loans were just recently granted, and given the poor track record of Chinese abilities to accurately price credit risk, another significant round of cash infusion may be necessary to bail out the new loans. In May 2006, the accounting firm of Ernst and Young released a report stating that China's NPLs totaled $911 billion (40 percent of China's GDP), a figure far surpassing official estimates of $164 billion.[174] Additionally, in the first four months of 2006, Chinese banks lent 60 percent of the credit they issued for all of 2005. That furious pace of lending "is bound to give rise to future bad loans."[175]

E. GOVERNMENT INTERVENTION

Although Chinese authorities have made significant progress on their financial and banking system reforms, much still needs to be done. China is fortunate in that there are several extenuating circumstances that still make its inefficient banking sector still viable. China's continued high rate of GDP growth and high rate of savings have channeled funds into the banking system while a $20 – 30 billion annual trade surplus combined with foreign direct investment at about $40 billion per year have resulted in the accumulation of foreign exchanges reserves in excess of

174 Gary Schmitt, Jared Feiger "Don't Bank on China" *The Weekly Standard*, Jun 19, 2006. http://www.proquest.com/ (Accessed Sep 13, 2007).

175 Ibid.

$200 billion.[176] This cash reserve combined with China's manageable debt burden provides some reassurance that China is not facing an imminent financial crisis.

Since the big four banks are fully government owned and the central government, directly or indirectly, controls 95 percent of the assets of most other banks through shares, Beijing simply cannot allow the banking sector to fail. At the end of 2005, lending from the four state banks was roughly 70 percent of GDP, while total bank lending was about 113 percent of GDP, and the bank deposit base was just under 158 percent of GDP.[177] The banks strategic importance as lenders to the state firms which employ millions guarantees that politics and lending will be symbiotically intertwined. Fortunately, this inter-dependency ensures that continued banking reform should continue to figure prominently on the national political agenda.

176 Dick Nanto and Radha Sinha, "China's Banking Reform" *Post-Communist Economies*, Vol 14, No. 4, (2002).

177 Brad Setser, "The Chinese Conundrum: External Financial Strength, Domestic Financial Weakness" *Paper produced for CESifo Conference*, (University College: Oxford), 2006.

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V. CONCLUSION

China must modernize its weaponry in order for the PLA to be a credible military force and enable China to continue its rise as a regional and global power. PLA modernization expenditures will have to compete with other societal reform programs for the windfall from an expanding economy. Arguably, the most important on-going reform involves the banking sector in order to allow Beijing to better mobilize and utilize its capital resources.

The central government has explicitly stated the need to underwrite an RMA and modernize the PLA. Continued banking reform is an essential component to grow the Chinese economy and secure the significant and sustained defense spending that is critical to the PLA modernization effort. The ultimate success of banking reforms depends on authorities creating strong incentives for banks to base lending decisions on established commercial principles. Also, there needs to be a standard set of incentives for bank managers to responsibly discharge their fiduciary responsibilities, and regulations and procedures to punish, or hold accountable, those managers that don't maintain established standards. These measures are important for the overall growth of the economy and for the overall modernization of the PLA.

The PLA has witnessed significant developments since its genesis as the Revolutionary Red Army. It remains a powerful state institution and the *de facto* guarantor of power in China. Its modernization efforts paralleled the doctrinal shifts as Beijing's leaders scanned their

environment and prepared their nation to confront their greatest perceived threats. From “People’s War” to “People’s War Under Modern Conditions” to the Revolution in Military Affairs, the PLA has adapted to the various political pressures in order to redefine itself.

Current world trends and events are placing contemporary pressures onto PLA modernization efforts. The combination of the RMA, the end of the Cold War, the overall trend toward globalization, the exorbitant cost of advanced weapons, and the rapid pace of technological innovation has made it virtually impossible for countries to independently develop advanced weaponry. Globally, defense industries are shrinking and consolidating. States that once had the capability to develop and produce their own weapons are increasingly pursuing joint development to help offset the enormous costs of modern advanced weapon systems.[178]

As China becomes older, wealthier, and more urbanized CCP leaders will come under increasing pressure to provide more social services to its citizens. Defense expenditures and PLA modernization efforts will have to compete with additional government spending on pensions, health care, public infrastructure and the environment. Without a tangible, external threat or enemy to unify the common Chinese citizen to support greater defense spending, social tensions will continue to plague CCP leaders. In 1993,

178 Jane’s Defence Weekly, “Post-2000 Delays to China’s Arms Goals,” 29, no.3 (1998): 22.

there were 8,700 mass protests and demonstrations in. By 2005, that number increased to 83,000.[179]

The worlds leading commercial banks use market principles to evaluate and manage the myriad risks they face in their business operations. Their credit decisions are based on objective evaluation and independent of political considerations and personal connections. If the Chinese government wishes to keep majority ownership during the financial system's continued development and evolution to free-market principles, then Beijing's expectation that the state banks "will behave like commercial banks is likely to be disappointed."[180] However, if banking reforms are successful and China can steadily grow its economy through the more efficient mobilization and utilization of its capital resources, then defense expenditures of two to five percent of GDP are sustainable. Senior PLA leaders will still have to prioritize their modernization efforts to ensure they get the biggest "bang for their buck" but a steadily growing economy will provide predictability for expensive multi-year weapons development and procurement programs.

179 Jae Ho Chung, Hongyi Lai, and Ming Xia, "Mounting Challenges to Governance in China: Surveying Collective Protestors, Religious Sects and Criminal Organizations," in *The China Journal*, no. 56 (2006): 1.

180 Dobson and Kashyap, 40.

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